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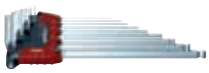
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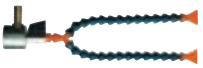	Coolant delivery systems	70-97
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Single open-end spanner

DIN 894

- Jaw position 15°, robust handle, die-forged
- Up to size 75 mm = black
  Size 80 mm upwards = steel grey

Wr. width mm	L mm	art.no.	€
6	75	**700160** 0006	1,18
7	80	700160 0007	1,22
8	95	700160 0008	1,22
9	100	700160 0009	1,31
10	105	700160 0010	1,26
12	125	700160 0012	1,51
13	135	700160 0013	1,51
14	140	700160 0014	1,51
17	151	700160 0017	1,44
19	170	700160 0019	1,78
22	195	700160 0022	2,24
		7101	

Wr. width mm	L mm	art.no.	€
24	215	700160 0024	2,89
27	240	700160 0027	3,31
30	260	700160 0030	4,07
32	275	700160 0032	4,39
36	305	700160 0036	5,65
41	340	700160 0041	7,10
46	380	700160 0046	8,30
50	410	700160 0050	11,05
55	440	700160 0055	12,65
60	477	700160 0060	22,60
65	510	700160 0065	27,10
		7101	

Adjustable spanner, DIN 3117A

DIN 3117A

- **Adjustable**
- Swedish model, 15° jaw position
- Worm screw with anticlockwise rotation
- Material: Chrome vanadium steel, phosphate-treated, head ground

Phosphate-treated

max. jaw aperture mm	L mm	art.no.	€
19	150	**700165** 0020	11,10
24	200	700165 0025	10,70
29	250	700165 0030	16,85
33.5	300	700165 0036	17,85
45	375	700165 0043	32,50
		7101	

ATORN® Adjustable spanner

- **Adjustable**
- Jaw position 15°

Standard version

- **Material**: Chrome vanadium steel, burnished or chrome-plated

max. jaw aperture mm	L mm	Burnished art.no.	€	Chrome-plated art.no.	€
19	150	**700166** 0006	12,10	**700167** 0006	14,75
24	200	700166 0008	14,75	700167 0008	15,75
29	250	700166 0010	18,45	700167 0010	20,25
33	300	700166 0012	24,75	700167 0012	29,75
45	375	700166 0015	32,75	700167 0015	34,60
55	450	700166 0018	56,85	700167 0018	60,45
60	600			700167 0024	110,45
62	600	700166 0024	103,95		
		7102		7102	

ATORN® Double open-end spanner

DIN 3110 | ISO 10102

- Jaw position 15°
- Chrome vanadium steel, chrome-plated
- Slim design

Double open-end spanner, individual

Wr. width mm	L mm	art.no.	€
6 x 7	125	**700120** 0607	2,60
8 x 9	142	700120 0809	2,70
8 x 10	142	700120 0810	2,95
10 x 11	157	700120 1011	3,–
10 x 13	170	700120 1013	3,70
11 x 13	175	700120 1113	4,–
12 x 13	175	700120 1213	3,40
12 x 14	175	700120 1214	3,95
13 x 14	188	700120 1314	4,–
13 x 15	188	700120 1315	4,20
14 x 15	188	700120 1415	3,80

7102

Wr. width mm	L mm	art.no.	€
13 x 17	205	700120 1317	4,40
14 x 17	205	700120 1417	4,40
16 x 17	205	700120 1617	4,10
16 x 18	205	700120 1618	4,90
17 x 19	222	700120 1719	5,20
18 x 19	222	700120 1819	4,90
19 x 22	233	700120 1922	5,60
19 x 24	249	700120 1924	6,80
20 x 22	233	700120 2022	5,40
21 x 23	249	700120 2123	5,80
22 x 24	249	700120 2224	6,60

7102

Wr. width mm	L mm	art.no.	€
24 x 26	266	700120 2426	7,60
24 x 27	266	700120 2427	7,60
25 x 28	282	700120 2528	9,20
27 x 30	282	700120 2730	10,60
27 x 32	305	700120 2732	10,60
30 x 32	305	700120 3032	10,60
30 x 36	320	700120 3036	17,–
32 x 36	320	700120 3236	17,–
36 x 41	360	700120 3641	21,80
41 x 46	405	700120 4146	33,–

7102

Double open-end spanner sets, boxed

Contents	Wr. width mm	art.no.	€
7 pieces	6 x 7 - 8 x 9 - 10 x 11 - 12 x 13 - 14 x 15 - 16 x 17 - 18 x 19	**700125** 0007	26,80
8 pieces	6 x 7 - 8 x 9 - 10 x 11 - 12 x 13 - 14 x 15 - 16 x 17 - 18 x 19 - 20 x 22	700125 0008	29,80
10 pieces	6 x 7 - 8 x 9 - 10 x 11 - 12 x 13 - 14 x 15 - 16 x 17 - 18 x 19 - 20 x 22 - 24 x 27 - 30 x 32	700125 0010	45,–
12 pieces	6 x 7 - 8 x 9 - 10 x 11 - 12 x 13 - 14 x 15 -16 x 17 - 18 x 19 - 20 x 22 - 21 x 23 - 24 x 27 - 25 x 28 - 30 x 32	700125 0012	57,–

7102

ATORN® Combination spanner (15° angled ring end)

DIN 3113A | ISO 3318

- 12-point energy profile ring head
- 15° angled ring end
- Chrome vanadium steel, chrome-plated
- **Energy profile**
  can adapt to screws outside the tolerance range
  can loosen damaged screw heads
  protects screws
  offers a high force transmission ratio

Combination spanner, individual

Wr. width mm	L mm	art.no.	€
6	100	**700501** 0006	3,90
7	110	700501 0007	3,90
8	120	700501 0008	3,95
9	130	700501 0009	4,40
10	140	700501 0010	4,45
11	150	700501 0011	4,60
12	160	700501 0012	5,20

7102

Wr. width mm	L mm	art.no.	€
13	170	700501 0013	5,20
14	180	700501 0014	5,60
15	190	700501 0015	6,–
16	190	700501 0016	6,20
17	210	700501 0017	6,40
18	210	700501 0018	7,20
19	230	700501 0019	7,40

7102

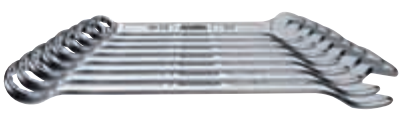
Wr. width mm	L mm	art.no.	€
20	230	700501 0020	8,60
21	260	700501 0021	8,80
22	260	700501 0022	9,80
24	280	700501 0024	11,20
27	310	700501 0027	13,–
30	340	700501 0030	15,20
32	360	700501 0032	16,80

7102

Combination spanner sets, boxed

Contents	Wr. width mm	art.no.	€
8 pieces	8 - 9 - 10 - 11 - 13 - 14 - 17 - 19	**700505** 0008	36,–
12 pieces	6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 17 - 19 - 22	700505 0012	57,–
12 pieces	10 - 11 - 12 - 13 - 14 - 17 - 19 - 22 - 24 - 27 - 30 - 32	700505 0112	96,–
17 pieces	6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 21 - 22	700505 0017	93,50
17 pieces	6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 15 - 16 - 17 - 18 - 19 - 20 - 22 - 24	700505 0117	98,–

7102



ATORN® Combination spanner (offset ring end)

DIN 3113B | ISO 3318

- 12-point energy profile ring head
- Offset ring end
- Chrome vanadium steel, chrome-plated
- **Energy profile**
  can adapt to screws outside the tolerance range
  can loosen damaged screw heads
  protects screws
  offers a high force transmission ratio

Combination spanner, individual

Wr. width mm	L mm	art.no.	€
6	100	**700507** 0006	5,20
7	110	700507 0007	5,20
8	120	700507 0008	5,20
9	130	700507 0009	6,–
10	140	700507 0010	5,60
11	150	700507 0011	6,20
12	160	700507 0012	6,60
13	170	700507 0013	7,–

7102

Wr. width mm	L mm	art.no.	€
14	180	700507 0014	7,40
15	190	700507 0015	8,–
16	190	700507 0016	8,60
17	210	700507 0017	8,80
18	210	700507 0018	9,80
19	230	700507 0019	10,20
20	230	700507 0020	10,60
21	260	700507 0021	*11,60*

7102

Wr. width mm	L mm	art.no.	€
22	260	700507 0022	12,40
24	280	700507 0024	14,60
27	310	700507 0027	16,40
30	340	700507 0030	19,60
32	360	700507 0032	21,40
36	360	700507 0036	35,60

7102

Combination spanner sets, boxed

Contents	Wr. width mm	art.no.	€
8 pieces	8 - 9 - 10 - 11 - 13 - 14 - 17 - 19	**700508** 0008	56,–
12 pieces	6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 - 17 - 19 - 22	700508 0012	84,–
12 pieces	10 - 11 - 12 - 13 - 14 - 17 - 19 - 22 - 24 - 27 - 30 - 32	700508 0112	132,–

7102

ATORN® Double-end ring spanner

DIN 838 | ISO 1085

- 12-point Energy profile ring head, 15° offset
- Chrome vanadium steel, chrome-plated
- **Energy profile**
  can adapt to screws outside the tolerance range
  protects screws
  offers a high force transmission ratio

Double-end ring spanner, individual

Wr. width mm	L mm	art.no.	€
6 x 7	178	**701005** 0607	5,20
8 x 9	195	701005 0809	5,40
8 x 10	195	701005 0810	6,40
10 x 11	200	701005 1011	6,–
10 x 13	220	701005 1013	7,20
12 x 13	220	701005 1213	6,60
12 x 14	220	701005 1214	7,40
13 x 14	220	701005 1314	7,60
13 x 15	225	701005 1315	7,80

7102

Wr. width mm	L mm	art.no.	€
13 x 17	250	701005 1317	8,–
14 x 15	235	701005 1415	7,–
14 x 17	250	701005 1417	8,–
16 x 17	250	701005 1617	7,60
16 x 18	250	701005 1618	9,–
17 x 19	285	701005 1719	8,60
18 x 19	285	701005 1819	8,40
19 x 22	300	701005 1922	10,80
19 x 24	320	701005 1924	13,20

7102

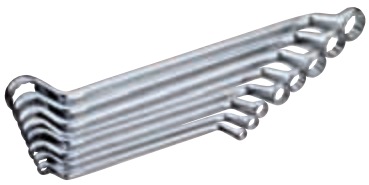
Wr. width mm	L mm	art.no.	€
20 x 22	300	701005 2022	10,–
22 x 24	320	701005 2224	12,80
24 x 26	330	701005 2426	14,40
24 x 27	330	701005 2427	13,–
25 x 28	345	701005 2528	15,–
27 x 32	360	701005 2732	17,20
30 x 32	360	701005 3032	16,40
36 x 41	450	701005 3641	34,–

7102

Double-end ring spanner sets, boxed

Contents	Wr. width mm	art.no.	€
8 pieces	6 x 7 - 8 x 9 - 10 x 11 - 12 x 13 - 14 x 15 - 16 x 17 - 18 x 19 - 20 x 22	**701010** 0008	55,–
10 pieces	6 x 7 - 8 x 9 - 10 x 11 - 12 x 13 - 14 x 15 - 16 x 17 - 18 x 19 - 20 x 22 - 24 x 27 - 30 x 32	701010 0010	80,–
12 pieces	6 x 7 - 8 x 9 - 10 x 11 - 12 x 13 - 14 x 15 - 16 x 17 - 18 x 19 - 20 x 22 - 21 x 23 - 24 x 26 - 25 x 28 - 30 x 32	701010 0012	98,–

7102



ATORN® Ratcheting combination spanner

- Ratchet with 72 teeth, 5° start angle
- Material: Chrome vanadium, chrome-plated
- **Caution: Do not use ring end for tightening**

Straight version, individual

Wr. width mm	art.no.	€
8	**700110** 0008	9,20
9	700110 0009	*9,20*
10	700110 0010	9,40
11	700110 0011	9,60
12	700110 0012	10,–
13	700110 0013	10,20
14	700110 0014	11,40
15	700110 0015	11,80
16	700110 0016	12,40
17	700110 0017	13,20
18	700110 0018	13,80
19	700110 0019	14,40
21	700110 0021	19,–
22	700110 0022	19,60
24	700110 0024	23,80
27	700110 0027	27,40
30	700110 0030	32,40
32	700110 0032	36,20

7102

Straight version, set

Description	Contents	Wr. width mm	art.no.	€
In a roll-up case	5 pieces	8 / 10 / 13 / 17 / 19	**700110** 1005	56,–

7102

Reversible, 15° angled ring end, individual

Wr. width mm	art.no.	€
8	**700111** 0008	13,40
9	700111 0009	13,60
10	700111 0010	14,20
11	700111 0011	14,80
12	700111 0012	*15,60*
13	700111 0013	15,80
14	700111 0014	17,80
15	700111 0015	18,40
16	700111 0016	19,40
17	700111 0017	20,20
18	700111 0018	22,–
19	700111 0019	22,40

7102

Reversible, 15° angled ring end, set

Description	Contents	Wr. width mm	art.no.	€
In a roll-up case	5 pieces	8 / 10 / 13 / 17 / 19	**700111** 1005	86,–

7102

With articulated head, individual

Wr. width mm	art.no.	€
8	**700112** 0008	15,–
9	700112 0009	15,20
10	700112 0010	15,60
11	700112 0011	16,20
12	700112 0012	*16,80*
13	700112 0013	17,20
14	700112 0014	*18,–*
15	700112 0015	*18,80*
16	700112 0016	20,60
17	700112 0017	21,–
18	700112 0018	22,–
19	700112 0019	*23,20*

7102

With articulated head, set

Description	Contents	Wr. width mm	art.no.	€
In a roll-up case	5 pieces	8 / 10 / 13 / 17 / 19	**700112** 1005	99,–

7102

Dual-sided ratchet function, individual

Wr. width mm	art.no.	€
8	**700115** 0108	12,–
10	700115 0110	12,40
13	700115 0113	14,20
17	700115 0117	18,–
19	700115 0119	19,20

7102

Dual-sided ratchet function, set

Description	Contents	Wr. width mm	art.no.	€
In a pouch	5 pieces	8 / 10 / 13 / 17 / 19	**700115** 0205	84,–

7102

ATORN® Adapter for ratcheting combination spanners

- Suitable for straight versions and articulated head versions

Adapter	suitable for wr. width mm	art.no.	€
1/4" bits, hexagonal	10	**700113** 0001	*7,60*
1/4" sockets, square	10	700113 0002	*2,25*
3/8" sockets, square	13	700113 0003	*9,20*
1/2" sockets, square	19	700113 0004	*10,40*

7102

Hook spanner

DIN 1810A DIN 1810B

- Special steel, hardened and burnished
- * not DIN-compliant

With milled nose, for DIN 1804 slotted nuts

- DIN 1810A

Wr. width mm	Total length mm	Thickness mm	art.no.	€
16 - 20	110	3	**701550** 0020	4,40
25 - 28	136	4	701550 0028	4,62
30 - 32	136	4	701550 0032	4,65
34 - 36	170	5	701550 0036	5,50
40 - 42	170	5	701550 0042	5,44
45 - 50	206	6	701550 0050	6,34

4159

Wr. width mm	Total length mm	Thickness mm	art.no.	€
52 - 55	206	6	701550 0055	6,50
58 - 62	240	7	701550 0062	9,60
68 - 75	240	7	701550 0075	9,52
80 - 90	280	8	701550 0090	12,90
95 - 100	280	8	701550 0100	12,95
110 - 115	335	10	701550 0115	22,65

4159

Wr. width mm	Total length mm	Thickness mm	art.no.	€
120 - 130	335	10	701550 0130	22,65
135 - 145	385	10*	701550 0145	27,90
155 - 165	385	10*	701550 0165	*27,90*
180 - 195	470	10*	701550 0195	*45,80*

4159

With pilot tip, for capstan nuts, DIN 1816

- DIN 1810B

Wr. width mm	Pin Ø mm	Pin length mm	Total length mm	Thickness mm	art.no.	€
16 - 18	2.5	2.5	110	3	**701560** 0020	4,94
25 - 28	3.0	3.0	136	4	701560 0028	5,58
30 - 32	4.0	3.0	136	4	701560 0032	5,58
34 - 36	4.0	3.5	170	5	701560 0036	6,56
40 - 42	4.0	3.5	170	5	701560 0042	6,60
45 - 50	5.0	4.0	206	6	701560 0050	8,18
52 - 55	5.0	4.0	206	6	701560 0055	8,24
58 - 62	5.0	5.0	240	7	701560 0062	10,95

4159

Wr. width mm	Pin Ø mm	Pin length mm	Total length mm	Thickness mm	art.no.	€
68 - 75	6.0	5.0	240	7	701560 0075	11,05
80 - 90	6.0	6.0	280	8	701560 0090	13,60
95 - 100	8.0	6.0	280	8	701560 0100	13,60
110 - 115	8.0	8.0	335	8*	701560 0115	*23,50*
120 - 130	8.0	8.0	335	8*	701560 0130	*23,50*
135 - 145	8.0	8.0	380	8*	701560 0145	*30,70*
180 - 195	10.0	8.0	470	10*	701560 0195	*51,70*

4159

Face spanner

- **Adjustable face wrench with electrically welded pins**
- Special steel, tempered to a burnished shade

Individual

Pin Ø mm	Adjusting range pin removal mm	Pin length mm	Total length mm	art.no.	€
3	11 - 60	4	160	**701570** 0003	8,34
4	11 - 60	5	160	701570 0004	8,34
5	14 - 100	6	215	701570 0005	12,10
6	14 - 100	7	215	701570 0006	12,10
8	14 - 100	8	215	701570 0008	12,65

4159

Set with replaceable pins (two sets per size)

- Special steel, hardened and galvanised
- Replaces five individual spanner sizes (Ø 1.5 / 2 / 2.5 / 3 / 4 mm)
- Supplied in a robust two-component box

Wr. width mm	Weight kg	art.no.	€
8 - 100	0.335	**701571** 0001	34,85

4159

Tyre lever

- Profiled, die-forged
- Chrome vanadium steel, chrome-plated

Straight version

Length mm	art.no.	€
300	**701535** 0300	7,–
400	701535 0400	10,70
500	701535 0500	13,80
600	701535 0600	21,10

7101

Offset version

Length mm	art.no.	€
400	**701536** 0400	27,10
500	701536 0500	28,10
600	701536 0600	36,40

7101

ATORN® Hexagonal offset screwdriver

ISO 2936 ISO 2936L

- For hexagonal socket head screws
- Hardness and torque according to ISO 2936 or ISO 2936L
- Chamfered key ends
- **Material**: high-quality chrome vanadium steel (59CrMoV4), black oiled or nickel-plated

Short version, ISO 2936

Wr. width mm	Edge length mm	Offset screwdriver, black, oiled art.no.	€	Nickel-plated art.no.	€
0.7	33 x 7	**703001** 0007	0,42		
0.9	33 x 11	703001 0009	0,36		
1.3	40 x 12			**703005** 0013	0,22
1.5	46.5 x 15.5	703001 0015	0,20	703005 0015	0,26
2.0	52 x 18	703001 0020	0,20	703005 0020	0,26
2.5	58.5 x 20.5	703001 0025	0,22	703005 0025	0,28
3.0	66 x 23	703001 0030	0,27	703005 0030	0,30
3.5	69.5 x 25.5	703001 0035	0,29	703005 0035	0,36
4.0	74 x 29	703001 0040	0,32	703005 0040	0,36
4.5	80 x 30.5	703001 0045	0,46	703005 0045	0,53
5.0	85 x 33	703001 0050	0,46	703005 0050	0,48
5.5	90.5 x 35.5	703001 0055	0,59	703005 0055	0,74
6.0	96 x 38	703001 0060	0,58	703005 0060	0,60
7.0	102 x 41	703001 0070	0,77	703005 0070	0,80
		7111		7111	

Wr. width mm	Edge length mm	Offset screwdriver, black, oiled art.no.	€	Nickel-plated art.no.	€
8.0	108 x 44	703001 0080	0,92	703005 0080	0,98
9.0	114 x 47	703001 0090	1,43	703005 0090	1,45
10.0	122 x 50	703001 0100	1,46	703005 0100	1,50
11.0	129 x 53	703001 0110	1,60	703005 0110	1,65
12.0	137 x 57	703001 0120	1,79	703005 0120	1,90
14.0	154 x 70	703001 0140	2,99	703005 0140	3,25
17.0	177 x 80	703001 0170	5,34	703005 0170	5,60
19.0	199 x 89	703001 0190	7,30	703005 0190	7,60
22.0	222 x 102	703001 0220	10,25	703005 0220	10,80
24.0	248 x 114	703001 0240	15,20	703005 0240	15,80
27.0	277 x 127	703001 0270	24,30	703005 0270	25,40
30.0	315 x 142			703005 0300	35,–
32.0	347 x 157			703005 0320	*45,40*
36.0	391 x 176			703005 0360	65,–
		7111		7111	

Extra-long version, ISO 2936 L

Wr. width mm	Edge length mm	Black, oiled art.no.	€	Nickel-plated art.no.	€
2.0	102 x 18	**703010** 0020	0,43	**703015** 0020	0,46
2.5	114.5 x 20.5	703010 0025	0,52	703015 0025	0,56
3.0	129 x 23	703010 0030	0,56	703015 0030	0,60
4.0	144 x 29	703010 0040	0,78	703015 0040	0,80
5.0	165 x 33	703010 0050	0,93	703015 0050	0,92
6.0	186 x 38	703010 0060	1,26	703015 0060	1,20
		7111		7111	

Wr. width mm	Edge length mm	Black, oiled art.no.	€	Nickel-plated art.no.	€
8.0	208 x 44	703010 0080	2,03	703015 0080	1,65
10.0	234 x 50	703010 0100	3,59	703015 0100	2,35
12.0	262 x 57	703010 0120	4,86	703015 0120	2,95
14.0	294 x 70	703010 0140	7,65	703015 0140	4,50
17.0	337 x 80	703010 0170	12,30	703015 0170	8,40
19.0	379 x 89	703010 0190	18,–	703015 0190	11,–
		7111		7111	

703020 3017

703020 0009

703020 1009

703020 0008

Sets, ISO 2936, ISO 2936 L

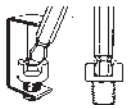
ISO design	Wr. width mm	Design	Black, oiled art.no.	€	Nickel-plated art.no.	€
2936	2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Ring-mounted	**703020** 0008	7,15	**703025** 0008	5,45
2936	2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Plastic box	703020 1008	7,80	703025 1008	7,80
2936-long	2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Plastic box	703020 2008	14,60	703025 2008	12,20
2936	2.5 / 3 / 4 / 5 / 6 / 8 / 10 / 12 / 14	Workshop stand	703020 0009	23,75	703025 0009	20,20
2936-long	2.5 / 3 / 4 / 5 / 6 / 8 / 10 / 12 / 14	Workshop stand	703020 1009	31,60	703025 1009	23,60
2936	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6	Hand-held fold-out holder, metal	703020 2007	5,60		
2936	2.5 / 3 / 4 / 5 / 6 / 8	Hand-held fold-out holder, metal	703020 2009	8,95	703025 2009	*9,95*
2936	2.5 / 3 / 4 / 5 / 6 / 8 / 10	Hand-held fold-out holder, metal	703020 2017	9,25		
2936	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6	Hand-held fold-out holder, plastic	703020 3007	9,40		
2936	2.5 / 3 / 4 / 5 / 6 / 8 / 10	Hand-held fold-out holder, plastic	703020 3017	13,10		
			7111		7111	

703025 1008

703025 2008

ATORN® Hexagonal offset ball-head screwdriver

- **With ball head**
- For hexagonal socket head screws
- Chamfered key ends, can be used for screwing at angles up to 30°
- **Material**: high-quality chrome vanadium steel (59CrMoV4), steel grey or nickel-plated



Short version

Wr. width mm	Edge length mm	Steel grey art.no.	€	Nickel-plated art.no.	€
2.0	52 x 18	**703030** 0020	0,86	**703031** 0020	0,88
2.5	58.5 x 20.5	703030 0025	0,92	703031 0025	0,96
3.0	66 x 23	703030 0030	0,97	703031 0030	1,01
4.0	74 x 29	703030 0040	1,30	703031 0040	1,34
5.0	85 x 33	703030 0050	1,45	703031 0050	1,49
6.0	96 x 38	703030 0060	1,88	703031 0060	1,97
7.0	102 x 41	703030 0070	2,90	703031 0070	2,99
8.0	108 x 44	703030 0080	3,21	703031 0080	3,37
10.0	122 x 50	703030 0100	4,38	703031 0100	4,71
		7111		7111	

Extra-long version

Wr. width mm	Edge length mm	Steel grey art.no.	€	Nickel-plated art.no.	€
1.5	91.5 x 15.5	**703033** 0015	0,62	**703034** 0015	0,84
2.0	102 x 18	703033 0020	0,62	703034 0020	0,84
2.5	114.5 x 20.5	703033 0025	0,62	703034 0025	0,90
3.0	129 x 23	703033 0030	0,68	703034 0030	0,92
4.0	144 x 29	703033 0040	0,85	703034 0040	1,35
5.0	165 x 33	703033 0050	1,05	703034 0050	1,45
6.0	186 x 38	703033 0060	1,32	703034 0060	1,85
7.0	197 x 41	703033 0070	4,10	703034 0070	3,70
8.0	208 x 44	703033 0080	2,50	703034 0080	2,85
10.0	234 x 50	703033 0100	4,01	703034 0100	4,–
12.0	262 x 57	703033 0120	7,–	703034 0120	5,60
		7111		7111	

Sets

Design	Wr. width mm	Packaging	Steel grey art.no.	€	Nickel-plated art.no.	€
Normal, 8 pieces	2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Plastic box	**703035** 0008	14,80	**703036** 0008	16,20
Long, 8 pieces	2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Plastic box	703035 1008	18,80	703036 1008	20,70
Long, 9 pieces	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Plastic clip	703035 3009	13,40	703036 3009	15,60
			7111		7111	

703036 0008 703036 1008 703036 3009

wiha Magnetiser

- For magnetising and de-magnetising blades and similar steel tools
- Tools should be demagnetised before starting work on electronic components.

B mm	H mm	T mm	art.no.	€
52	50	29	**705566** 0052	7,60
			7113	

Hexagonal offset screwdriver

- **Material:** Chrome vanadium steel, through-hardened and manganese phosphate-treated

ISO 2936K

Wr. width mm	Edge length mm	art.no.	€
1.3	41 x 13	**703028** 0013	0,21
1.5	46 x 15	703028 0015	0,21
2.0	51 x 18	703028 0020	0,21
2.5	51 x 18	703028 0025	0,22
3.0	64 x 23	703028 0030	0,29
4.0	72 x 29	703028 0040	0,38
5.0	83 x 33	703028 0050	0,51
6.0	94 x 38	703028 0060	0,68
7.0	99 x 41	703028 0070	0,93
8.0	105 x 44	703028 0080	1,15
9.0	112 x 47	703028 0090	1,48

7113

Wr. width mm	Edge length mm	art.no.	€
10.0	119 x 50	703028 0100	1,68
11.0	126 x 53	703028 0110	2,–
12.0	134 x 57	703028 0120	2,40
14.0	151 x 70	703028 0140	3,76
17.0	173 x 80	703028 0170	6,32
19.0	195 x 89	703028 0190	8,24
22.0	217 x 102	703028 0220	12,72
24.0	241 x 114	703028 0240	19,45
27.0	271 x 127	703028 0270	24,15
32.0	339 x 157	703028 0320	50,–

7113

In accordance with ISO 2936L

Wr. width mm	Edge length mm	art.no.	€
0.7	67 x 6	**703048** 0007	1,64
0.9	70 x 9	703048 0009	1,36
1.3	80 x 13	703048 0013	0,76
1.5	91 x 15	703048 0015	0,52
2.0	101 x 18	703048 0020	0,51
2.5	113 x 20	703048 0025	0,64
3.0	128 x 23	703048 0030	0,72
4.0	142 x 29	703048 0040	0,96

7113

Wr. width mm	Edge length mm	art.no.	€
5.0	163 x 33	703048 0050	1,07
6.0	184 x 38	703048 0060	1,33
7.0	194 x 41	703048 0070	1,64
8.0	206 x 44	703048 0080	1,92
10.0	231 x 50	703048 0100	2,64
12.0	259 x 57	703048 0120	3,52
14.0	291 x 70	703048 0140	5,52

7113

Hexagonal offset ball-head screwdriver, long

- **With ball head**, can be used for screwing at angles of up to 25°
- Chrome vanadium steel, through-hardened and burnished
- In accordance with ISO 2936L
- Especially for difficult-to-reach screws

Wr. width mm	Edge length mm	art.no.	€
1.3	74 x 14	**703070** 0013	0,98
1.5	91 x 15	703070 0015	0,98
2.0	101 x 18	703070 0020	0,98
2.5	113 x 20	703070 0025	1,–
3.0	128 x 23	703070 0030	1,04
4.0	142 x 29	703070 0040	1,43
5.0	163 x 33	703070 0050	1,60
6.0	184 x 38	703070 0060	2,04
8.0	206 x 44	703070 0080	3,20
10.0	231 x 50	703070 0100	4,72
12.0	259 x 57	703070 0120	6,24

7113

ATORN® Hexagonal offset screwdriver, coloured

- Hexagonal ball head on the long end, with wear-resistant powder coating
- Chrome vanadium steel, hardened
- In a practical plastic holder, keys are easy to remove
- Individual offset screwdriver sizes available on request

Design	Wr. width mm	Packaging	art.no.	€
Long, 9 pieces	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Plastic clip	**703044** 0009 7111	21,60

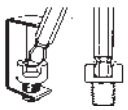
wiha ErgoStar hexagonal offset screwdriver

- Chrome vanadium steel, through-hardened with a matt chrome-plated finish
- Space-saving holder
- Mechanical operation allows each pin wrench to be removed easily without moving the others
- ***MagicRing***® in spring steel (from 3 mm size) holds any standard hex screw securely in any position - no time wasted hunting for dropped screws
- Can be used for screwing at angles of up to 25° thanks to ball head

Design	Wr. width mm	Packaging	art.no.	€
9 pieces	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	Plastic clip	**703041** 0009 7113	29,50

Bondhus Hexagonal offset screwdriver (pin wrench)

- Made from protanium steel for 20 % more torque than comparable hex keys



15-piece set
- Extra-long gloss nickel-plated design
- Supplied with a holder in plastic packaging

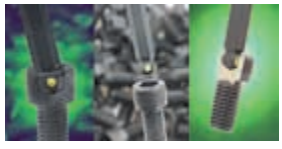
Contents	Wr. width mm	art.no.	€
1 ball-head hex key in each size	1.27 / 1.5 / 2 / 2.5 / 3 / 3.5 / 4 / 4.5 / 5 / 5.5 / 6 / 7 / 8 / 9 / 10	**703036** 3015 7112	34,75

9-piece "Stubby" set
- Extra-short handle for difficult-to-reach screws
- Corrosion protection: Bondhus® ProGuard™ surface protection is five times more effective than comparable coatings
- Supplied with a holder in plastic packaging

Contents	Wr. width mm	art.no.	€
1 ball-head hex key in each size	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	**703046** 0009 7112	18,95

Bondhus ProHold™ Balldriver® hex key set

- **9-piece set, 1.5 - 10 mm**
- Maximum stability and fitting accuracy
- Holds screws securely
- No wear or corrosion to the head
- Corrosion protection: Bondhus®ProGuard™ surface protection is five times more effective than comparable coatings
- Non-magnetic
- No reduction in key strength
- Supplied with plastic clip in a blister pack

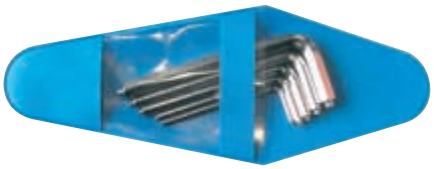


Contents	Wr. width mm	art.no.	€
1 Pro Hold ball-head hex key in each size	1.5 / 2 / 2.5 / 3 / 4 / 5 / 6 / 8 / 10	**703043** 0009 7112	23,85

ATORN® Hexagonal offset pilot-tip screwdriver (pin wrench)

DIN 6911

- **With pilot tip**
- For hexagonal socket head screws, DIN 6912
- Chamfered key ends,
- **Material**: high-quality chrome vanadium steel (59CrMoV4), nickel-plated



Individual

Wr. width mm	Edge length mm	Nickel-plated art.no.	€
3	62 x 21	**703037** 0003	0,38
4	70 x 27	703037 0004	0,44
5	81 x 31	703037 0005	*0,58*
6	92 x 36	703037 0006	0,78
8	102 x 42	703037 0008	1,13
		7111	

Wr. width mm	Edge length mm	Nickel-plated art.no.	€
10	116 x 48	703037 0010	1,88
12	131 x 55	703037 0012	2,85
14	147 x 67	703037 0014	4,26
17	170 x 77	703037 0017	6,80
		7111	

Set

Design	Wr. width mm	art.no.	€
5 pieces in a plastic pouch	3 / 4 / 5 / 6 / 8	**703039** 1005	6,10
		7111	

ATORN® TORX® offset screwdriver

- Strength as stipulated by the license issuer: RUIA global fasteners
- **Material**: high-quality chrome vanadium steel (59CrMoV4), steel grey

Individual

TORX	Edge length mm	Steel grey art.no.	€
T6	42.5 x 17.5	**703038** 0060	1,64
T7	48.5 x 17.5	703038 0070	1,64
T8	49 x 18	703038 0080	1,64
T9	48 x 16	703038 0090	1,46
T10	52 x 19	703038 0100	1,46
T15	55.5 x 20.5	703038 0150	1,49
T20	59 x 21	703038 0200	1,49
T25	62.5 x 23.5	703038 0250	1,49
		7111	

TORX	Edge length mm	Steel grey art.no.	€
T27	67.5 x 25.5	703038 0270	1,49
T30	74 x 29	703038 0300	1,60
T40	81 x 32	703038 0400	1,76
T45	89 x 36	703038 0450	2,33
T50	102 x 40	703038 0500	2,91
T55	118 x 46	703038 0550	4,02
T60	132 x 51	703038 0600	5,62
		7111	

703045 0008

703045 1008

Sets

Design	TORX	art.no.	€
8 pieces, ring-mounted in a hang-up bag	T9 / T10 / T15 / T20 / T25 / T27 / T30 / T40	**703045** 0008	25,50
8 pieces Plastic box	T9 / T10 / T15 / T20 / T25 / T27 / T30 / T40	703045 1008	15,60
8 pieces Hand-held fold-out holder	T9 / T10 / T15 / T20 / T25 / T27 / T30 / T40	703045 2008	15,85
		7111	

703045 2008

ATORN® TORX® offset ball-head screwdriver

- **With ball head**
- Strength as stipulated by the license issuer: RUIA global fasteners
- **Material**: high-quality chrome vanadium steel (59CrMoV4), steel grey

Design	TORX	art.no.	€
8 pieces Plastic clip	T9 / T10 / T15 / T20 / T25 / T27 / T30 / T40	**703047** 1008	22,40
		7111	

ATORN® TORX® offset screwdriver, coloured

- TORX®ball head on the long end, with wear-resistant powder coating
- Chrome vanadium steel, hardened
- In a practical plastic holder, keys are easy to remove
- Individual offset screwdriver sizes available on request

Design	TORX	art.no.	€
8 pieces Plastic clip	T9 / T10 / T15 / T20 / T25 / T27 / T30 / T40	**703056** 0008	26,–

7111

wiha ErgoStar TORX® offset screwdriver

***ErgoStar MagicSpring®* TORX® offset screwdriver**

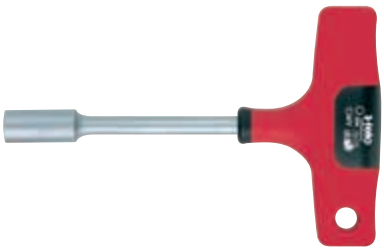
- Chrome vanadium steel, through-hardened and burnished
- Space-saving holder
- Mechanical operation allows each pin wrench to be removed easily without moving the others
- **MagicSpring®** retaining spring holds TORX®screws securely and reliably - no more hunting for dropped screws

Design	TORX	Packaging	art.no.	€
With MagicSpring®, 13 pieces	T6 / T7 / T8 / T9 / T10 / T15 / T20 / T25 / T27 / T30 / T40 / T45	Plastic clip	**703062** 1001	63,90

7113

felo T-handle screwdriver

- 2-component handle with comfortable non-slip soft covering
- Blade made from a special chrome vanadium and chrome molybdenum vanadium compound
- Matt chrome-plated finish with black tip
- Exceptional hardness and elasticity far above DIN and ISO requirements



Hex

Wr. width mm	Blade length mm	Handle width mm	art.no.	€
2.0	100	100	**706001** 0020	4,70
2.5	100	100	706001 0025	4,75
3.0	150	100	706001 0030	4,85
4.0	150	100	706001 0040	5,–
5.0	150	100	706001 0050	5,20
6.0	150	100	706001 0060	5,45
8.0	200	100	706001 0080	6,85
10.0	200	100	706001 0100	8,15

7112

Hexagonal socket tool

Wr. width mm	Blade length mm	Handle width mm	art.no.	€
6.0	230	100	**706005** 0060	9,55
8.0	230	100	706005 0080	9,85
10.0	230	100	706005 0100	10,20
12.0	230	100	706005 0120	10,95
13.0	230	100	706005 0130	11,95

7112

TORX®

TORX	Blade length mm	Handle width mm	art.no.	€
T10	125	100	**706010** 0010	6,65
T15	125	100	706010 0015	6,75
T20	125	100	706010 0020	5,85
T25	125	100	706010 0025	5,85
T27	200	100	706010 0027	7,20
T30	200	100	706010 0030	8,25

7112

ATORN® T-handle screwdriver

T-handle hexagonal screwdriver

- Straight, with ergonomic T-handle
- Through-hardened blade
- Front edges rounded, gloss nickel-plated
- **Material**: high-quality chrome vanadium steel

Wr. width mm	Blade length mm	art.no.	€
2.0	100	**703060** 0020	2,35
2.5	100	703060 0025	2,40
3.0	100	703060 0030	2,25
3.0	150	703060 0130	2,40
3.0	200	703060 0230	2,70
4.0	100	703060 0040	2,30
4.0	150	703060 0140	2,55
4.0	200	703060 0240	2,75
5.0	100	703060 0050	2,60
5.0	150	703060 0150	2,75
5.0	200	703060 0250	3,20
6.0	100	703060 0060	2,95
6.0	150	703060 0160	3,10
6.0	200	703060 0260	3,30
8.0	100	703060 0080	3,40
8.0	150	703060 0180	3,70
8.0	200	703060 0280	3,90
10.0	100	703060 0100	5,80
10.0	200	703060 2100	7,20

7111

TORX® T-handle screwdriver

- Handle made from shock-proof ABS terpolymer
- Chrome-plated blade with black tip
- Strength as stipulated by the license issuer: RUIA global fasteners
- Material: high-quality chrome vanadium steel (59CrMoV4)

TORX	Total length mm	Blade length mm	TORX key art.no.	€
T8	121	100	**703040** 0080	3,95
T9	125	100	703040 0090	4,20
T10	121	100	703040 0100	4,30
T15	121	100	703040 0150	4,30
T15	225	200	703040 1150	5,23
T20	132	100	703040 0200	4,80
T20	232	200	703040 1200	5,79
T25	132	100	703040 0250	4,80
T25	232	200	703040 1250	6,18
T27	132	100	703040 0270	4,95
T27	232	200	703040 1270	6,83
T30	132	100	703040 0300	5,–
T30	232	200	703040 1300	7,15
T40	132	100	703040 0400	5,40
T40	232	200	703040 1400	7,80
T45	189	150	703040 0450	8,–
T45	289	250	703040 1450	10,05
T50	189	150	703040 0500	9,40
T50	289	250	703040 1500	11,80

7111

7-piece set

Contents	art.no.	€
2 x 100 mm - 2.5 x 100 mm - 3 x 100 mm - 4 x 150 mm - 5 x 150 mm - 6 x 200 mm - 8 x 200 mm	**703061** 0007	19,–

7111

wiha TORX® flag-handle screwdriver

- **Material:** high-quality chrome vanadium steel, through-hardened and burnished

Individual

TORX	Total length mm	Blade length mm	art.no.	€
T6	62	35	**703042** 0060	3,24
T7	67	35	703042 0070	3,24
T8	72	40	703042 0080	3,24
T9	74	40	703042 0090	3,56
T10	74	40	703042 0100	3,68
T15	80	45	703042 0150	3,80
T20	80	45	703042 0200	4,16

7113

Set, 7 pieces in a small workbench stand

Contents	art.no.	€
T6 / T7 / T8 / T9 / T10 / T15 / T20	**703042** 0001	30,70

7113

BONDHUS TORX® and TORX PLUS® wing-handle screwdrivers

- 2-component handle
- Oil-free surface for a secure grip
- Resistant to alkaline solutions
- **Material:** Tool steel

TORX®

TORX	art.no.	€
T6	**703051** 0060	3,60
T7	703051 0070	3,25
T8	703051 0080	3,25
T9	703051 0090	3,25
	7113	

TORX	art.no.	€
T10	703051 0100	3,25
T15	703051 0150	3,25
T20	703051 0200	3,25
	7113	

TORX® set, 7 pieces in a small workbench stand

Contents	art.no.	€
T6 / T7 / T8 / T9 / T10 / T15 / T20	**703051** 0001	28,75
	7113	

TORX PLUS®

TORX plus	art.no.	€
6IP	**703052** 0060	3,45
7IP	703052 0070	3,45
8IP	703052 0080	3,45
9IP	703052 0090	3,90
	7113	

TORX plus	art.no.	€
10IP	703052 0100	3,90
15IP	703052 0150	4,10
20IP	703052 0200	4,50
	7113	

TORX PLUS® set, 7 pieces in a small workbench stand

Contents	art.no.	€
6IP / 7IP / 8IP / 9IP / 10IP / 15IP / 20IP	**703052** 0001	33,10
	7113	

ATORN® TORX® and TORX PLUS® flag-handle screwdrivers

- **Material:** high-quality molybdenum vanadium steel

TORX®

Wr. width mm	Total length mm	Blade length mm	Key art.no.	€
T5	67	33	**703053** 0050	2,80
T6	67	33	703053 0060	2,80
T7	67	33	703053 0070	2,80
T8	67	33	703053 0080	2,85
			7114	

Wr. width mm	Total length mm	Blade length mm	Key art.no.	€
T9	74	37	703053 0090	2,85
T10	74	37	703053 0100	3,–
T15	80	43	703053 0150	3,05
T20	80	43	703053 0200	3,10
			7114	

TORX® set, 7 pieces in a small workbench stand

Contents	art.no.	€
T6 / T7 / T8 / T9 / T10 / T15 / T20	**703053** 0001	19,50
	7114	

TORX PLUS®

Wr. width mm	Total length mm	Blade length mm	art.no.	€
5IP	67	33	**703054** 0050	3,95
6IP	67	33	703054 0060	3,95
7IP	67	33	703054 0070	3,95
8IP	67	33	703054 0080	3,95
			7114	

Wr. width mm	Total length mm	Blade length mm	art.no.	€
9IP	74	37	703054 0090	4,15
10IP	74	37	703054 0100	4,15
15IP	80	43	703054 0150	4,55
20IP	80	43	703054 0200	5,20
			7114	

TORX PLUS® set, 7 pieces in a small workbench stand

Contents	art.no.	€
6IP / 7IP / 8IP / 9IP / 10IP / 15IP / 20IP	**703054** 0001	28,95
	7114	

ATORN® Screwdriver

DIN 5265 D | DIN 5262 D

- With 3-component heavy-duty handle, steel blue and black, with extra-large soft zone
- Blade made from through-hardened chrome vanadium molybdenum steel, matt chrome-plated finish
- With black tip

Flat head

- DIN 5265 D
- Hexagonal bolster for models over 5.5 mm

Cutting edge width mm	Blade length mm	art.no.	€
3.5	75	**705138** 0035	3,45
4.5	90	705138 0045	4,05
5.5	100	705138 0055	5,40
6.5	125	705138 0065	6,40
8.0	150	705138 0080	8,–
10.0	175	705138 0100	9,20
12.0	200	705138 0120	11,60

7114

PH Phillips recess

- DIN 5262 D

PH	Blade length mm	art.no.	€
PH1	80	**705139** 0001	4,55
PH2	100	705139 0002	5,60
PH3	150	705139 0003	7,40

7114

PZ Pozidriv-Supadriv

- DIN 5262 D

PZ	Blade length mm	art.no.	€
PZ1	80	**705140** 0001	4,70
PZ2	100	705140 0002	5,60
PZ3	150	705140 0003	7,80

7114

Security TORX®

- Security version from T10

TORX	Blade length mm	TORX screwdriver art.no.	€
T6	60	**705141** 0006	4,60
T7	60	705141 0007	4,70
T8	60	705141 0008	4,80
T9	60	705141 0009	4,90
TR10	100	705141 0010	5,–
TR15	100	705141 0015	5,20
TR20	100	705141 0020	5,40
TR25	100	705141 0025	5,60
TR27	100	705141 0027	5,80
TR30	115	705141 0030	6,20
TR40	125	705141 0040	6,40

7114

Sets

705143 0005

Contents	Slot mm	PH	PZ	TORX	Six-edged mm	art.no.	€
6 pieces	3.5 / 4.5 / 5.5 / 6.5 / 8.0 / 10.0	-	-	-	-	**705143** 0001	32,60
3 pieces	-	PH1 / PH2 / PH3	-	-	-	705143 0002	17,60
3 pieces	-	-	PZ1 / PZ2 / PZ3	-	-	705143 0003	18,–
6 pieces	4.5 / 5.5 / 6.5 / 8.0	PH1 / PH2	-	-	-	705143 0004	30,20
8 pieces	5.5 / 6.5 / 8.0	PH1 / PH2 / PH3	PZ1 / PZ2	-	-	705143 0005	41,60
3 pieces	-	-	-	TR10 / TR15 / TR20	-	705143 0006	16,–
5 pieces	-	-	-	T6 / T7 / T8 / T9 / TR10	-	705143 0007	24,–
5 pieces	-	-	-	TR10 / TR15 / TR20 / TR25 / TR30	-	705143 0008	27,80
7 pieces	-	-	-	T8 / T9 / TR10 / TR15 / TR20 / TR25 / TR30	-	705143 0009	37,20

7114

felo Screwdriver

DIN 5260 DIN 5261

- Blade made from chrome molybdenum vanadium steel
- Matt chrome-plated with black tip
- Ergonomic handle made from shock-proof polypropylene
- Handle with slip protection and hanging or lever-insertion hole

Flat head

- DIN 5260

Slot mm	Blade width mm	Blade length mm	Total length mm	art.no.	€
2.5 x 0.4	2.5	75	155	**705101** 0025	2,50
3.0 x 0.5	3	80	160	705101 0030	2,80
3.5 x 0.6	3.5	100	180	705101 0035	3,20
4.0 x 0.8	4	100	190	705101 0040	3,40
5.0 x 0.8	5	125	215	705101 0050	3,80
5.5 x 1.0	5	125	223	705101 0055	4,95
6.5 x 1.2	6	125	223	705101 0065	5,05
8.0 x 1.2	7	175	280	705101 0080	7,–
10.0 x 1.6	8	200	305	705101 0100	10,–

7112

PH Phillips

- DIN 5261

PH	Blade width mm	Blade length mm	Total length mm	art.no.	€
PH0	3	60	140	**705104** 0010	3,05
PH1	4.5	80	170	705104 0011	3,70
PH2	6	100	198	705104 0012	5,45
PH3	8	150	255	705104 0013	7,60

7112

PZ Pozidriv

- DIN 5260

PZ	Blade width mm	Blade length mm	Total length mm	art.no.	€
PZ0	3	60	140	**705103** 0010	3,05
PZ1	4.5	80	170	705103 0011	3,70
PZ2	6	100	198	705103 0012	5,45
PZ3	8	150	255	705103 0013	7,60

7112

TORX®

- DIN 5261

TORX	Blade width mm	Blade length mm	Total length mm	TORX key art.no.	€
T6	3	60	140	**705105** 0006	5,25
T7	3	60	140	705105 0007	5,–
T8	3.5	60	140	705105 0008	5,–
T9	3.5	60	140	705105 0009	5,–
T10	3.5	100	190	705105 0010	5,35
T15	4	100	190	705105 0015	5,35
T20	5	100	198	705105 0020	5,65
T25	5	100	198	705105 0025	5,65
T27	5	100	198	705105 0027	5,80
T30	6	115	220	705105 0030	6,70
T40	8	125	230	705105 0040	*7,90*

7112

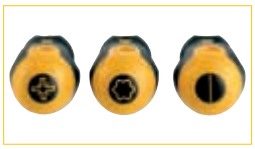
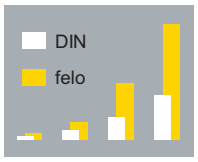
Sets, flat head and PH Phillips

Contents	Slot mm	PH	art.no.	€
5 pieces	3.5 / 4.0 / 5.5	PH1x80 / PH2x100	**705106** 0005	21,60
7 pieces	3.5 / 4.0 / 5.5 / 6.5 / 8.0	PH1 / PH2	705106 0007	33,95

7112

felo ERGONIC screwdriver

- Blade made from chrome molybdenum vanadium steel, matt chrome-plated with black tip
- Ergonomic 3-component handle
- **The first handle that adjusts to fit your hand!**
- Handle core encased in a hard-wearing, resilient body, with recess-mounted padding made from flexible plastic
- Hand and handle interlock, reducing the force required
- The material's flexibility results in greater sensitivity thus enabling force to be applied with precision
- Optimum performance data, up to 100 % higher than DIN requirements
- Handle core made from **shock-proof** hard plastic
- Hexagonal blade with bolster for slotted, PH and PZ screw heads
- Round blade for TORX® and for flat head, PH, PZ and® security Torx on request
- EAN code on every tool
- Screw symbols on the top of the handle

Flat head

Slot mm	Blade width mm	Blade length mm	Total length mm	art.no.	€
4.0 x 0.8	4	75	165	**705121** 0040	6,80
5.5 x 1.0	5	100	199	705121 0055	7,65
6.5 x 1.2	6	125	225	705121 0065	9,55
8.0 x 1.2	8	150	255	705121 0080	12,75
10.0 x 1.6	10	175	280	705121 0100	14,60
12.0 x 2.0	10	200	305	705121 0120	16,60

7112

PH Phillips

PH	Blade width mm	Blade length mm	Total length mm	art.no.	€
PH1	5	80	174	**705124** 0011	7,60
PH2	6.35	100	206	705124 0012	9,80
PH3	8	150	262	705124 0013	13,20

7112

PZ Pozidriv

PZ	Blade width mm	Blade length mm	Total length mm	art.no.	€
PZ1	5	80	174	**705127** 0011	7,70
PZ2	6.35	100	206	705127 0012	9,90
PZ3	8	150	262	705127 0013	13,20

7112

TORX®

TORX	Blade width mm	Blade length mm	Total length mm	art.no.	€
T7	3	60	146	**705128** 0007	7,05
T8	3	60	146	705128 0008	7,05
T9	3.5	60	146	705128 0009	7,05
T10	3.5	100	186	705128 0010	7,95
T15	4	100	194	705128 0015	7,95
T20	4	100	201	705128 0020	8,85
T25	5	100	206	705128 0025	8,85
T27	5	100	206	705128 0027	*8,95*
T30	6	115	227	705128 0030	11,10
T40	8	125	237	705128 0040	11,80

7112

Sets

Contents	Slot mm	PH	TORX	art.no.	€
6 pieces	3.0 / 4.0 / 5.5 / 6.5	PH1 / PH2		**705129** 0006	42,75
6 pieces			T8 / T9 / T10 / T15 / T20 / T25	705129 1006	44,90

7112

wiha TORX PLUS® screwdriver

- Round blade, high-quality chrome vanadium molybdenum steel, through-hardened with a matt chrome-plated finish
- Ergonomic multi-component handle with slip protection
- Wiha ChromTop® Blade tip guarantees maximum dimensional stability

TORX plus	Total length mm	Blade length mm	**TORX Plus** art.no.	€
6IP	164	60	**705145** 0006	5,45
7IP	164	60	705145 0007	5,45
8IP	164	60	705145 0008	5,45
9IP	171	60	705145 0009	5,85
10IP	191	80	705145 0010	6,–
15IP	191	80	705145 0015	6,25
			7113	

TORX plus	Total length mm	Blade length mm	**TORX Plus** art.no.	€
20IP	218	100	705145 0020	6,65
25IP	218	100	705145 0025	6,90
27IP	233	115	705145 0027	7,25
30IP	233	115	705145 0030	7,70
40IP	254	130	705145 0040	8,15
			7113	

felo *smart* screwdriver set

- 13-piece replaceable blade set
- Patented ergonomic 2K handle, screwdriver and T-handle in one
- Can be combined to create a total of 72 different fastening tools for screws and nuts (24 screwdrivers, 24 T-handles, 24 bits)
- Blades made from chrome molybdenum vanadium steel
- Suitable for the entire 1/4" standard range
- In a sturdy and secure StrongBox

Contents	Slot mm	PH	PZ	Interior hexagon mm	TORX	art.no.	€
1 handle; 12 twin blades (1/4")	0.6 0.8 1.0 1.2	PH1 PH2 PH3	PZ1 PZ2 PZ3	3 4 5 6	T6 T7 T8 T9 T10 T15 T20 T25 T30 T40	**702106** 0013	84,45
						7112	

felo Interchangeable precision screwdriver set

- Ergonomically perfected 2-component handle with easily rotatable cap
- Interchangeable blades with hexagonal shank
- Plastic box

Contents	Slot mm	PH	PZ	art.no.	€
7 pieces; incl. 102 x 19 mm handle	1.5 3.0 - 2.0 3.5 - 2.5 4.0	PH1 PH0 - PH00 PH000	PZ1 - PZ0	**705002** 0007	45,05
				7112	

Precision screwdriver set

- **Watchmaker's screwdriver**
- Chrome-plated profiled handle
- Plastic box

Contents	Slot mm	PH	art.no.	€
6 pieces	1.4 2.0 2.4 2.9	PH0 PH1	**705001** 0006	5,90
			7114	

ATORN® VDE screwdriver

DIN 7437 DIN 7438

- With 3-component heavy-duty handle, red and yellow
- Blade made from hardened and burnished chrome vanadium molybdenum steel
- Protective insulation sprayed directly onto the blade

Flat head

- DIN 7437

Cutting edge width mm	Blade length mm	art.no.	€
2.5	75	**705170** 0025	3,30
3.0	100	705170 0030	3,25
3.5	100	705170 0035	3,50
4.0	100	705170 0040	4,35
5.5	125	705170 0055	5,60
6.5	150	705170 0065	6,20
8.0	175	705170 0080	7,40
10.0	200	705170 0100	9,20
		7114	

PH Phillips

- DIN 7438

PH	Blade length mm	art.no.	€
0	60	**705171** 0000	4,–
1	80	705171 0001	4,75
2	100	705171 0002	6,–
3	150	705171 0003	7,20
		7114	

PZ Pozidriv-Supadriv

- DIN 7438

PZ	Blade length mm	art.no.	€
0	60	**705172** 0000	4,45
1	80	705172 0001	5,20
2	100	705172 0002	6,40
3	150	705172 0003	8,40
		7114	

Set

Contents	Slot mm	PH	PZ	art.no.	€
3 pieces	-	PH1 - PH2 - PH3	-	**705173** 0001	14,40
3 pieces	-	-	PZ1 - PZ2 - PZ3	705173 0002	19,40
5 pieces	2.5 - 4.0 - 5.5 - 6.5 - 8.0	-	-	705173 0003	23,20
6 pieces	2.5 - 3.5 - 4.0 - 5.5	PH1 - PH2	-	705173 0004	24,60
7 pieces incl. voltage tester	2.5 - 4.0 - 5.5 - 6.5	PH1 - PH2	-	705173 0005	29,20
				7114	

VDE voltage tester

- 150 - 250 V testing range
- VDE 0680

Slot mm	Blade length mm	art.no.	€
3.0	140	**705565** 3014	2,05
3.5	187	705565 3519	2,70
		7112	

wiha SoftFinish® VDE screwdriver

DIN ISO 2380 | DIN ISO 8764

- VDE screwdriver with 1,000 V AC protective insulation, GS-tested.
- Individually tested underwater at 10,000 V, manufactured in accordance with IEC 60900:2012
- Protective insulation sprayed directly onto the blade
- Ergonomic SoftFinish®handle for quick and easy work
- High-quality chrome vanadium steel, through-hardened and burnished

Flat head

- DIN ISO 2380

Slot mm	Thickness mm	Blade length mm	art.no.	€
2.5	0.4	75	**705157** 0025	4,72
3.0	0.5	100	705157 0030	4,72
3.5	0.6	100	705157 0035	4,88
4.0	0.8	100	705157 0040	6,–
4.5	1.0	125	705157 0045	6,76
5.5	1.0	125	705157 0055	7,56
6.5	1.2	150	705157 0065	8,65
8.0	1.2	175	705157 0080	10,10

7113

PH Phillips

- DIN ISO 8764

PH	Blade length mm	art.no.	€
0	60	**705158** 0000	5,52
1	80	705158 0010	6,64
2	100	705158 0020	8,08
3	150	705158 0030	10,10

7113

PZ Pozidriv

- DIN ISO 8764

PZ	Blade length mm	art.no.	€
1	80	**705159** 0010	7,24
2	100	705159 0020	8,80
3	150	705159 0030	11,50

7113

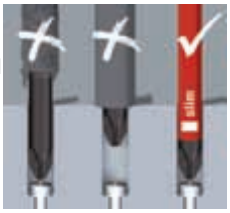
Set

Contents	Slot mm	PH	art.no.	€
6 pieces	2.5 - 3.5 - 4.5 - 5.5	PH1 - PH2	**705160** 0006	32,50

7113

wiha slimVario VDE screwdriver set

- Wiha SoftFinish® multi-component electrical handle with slip protection
- ClickFix quick-release holder keeps bits securely locked
- Bits made from high-quality chrome vanadium steel, through-hardened and burnished
- Protective insulation individually tested at 1,000 V AC, VDE and GS-tested
- Easy access to deep-set screw connections
- Clearly arranged in a high-quality and hard-wearing pouch
- Incl. SoftFinish® 110 - 250 V voltage tester



Contents	Slot mm	PH	PZ	TORX	art.no.	€
16 pieces; 1x slimVario holder; 1x voltage tester	2.5 3 4 5.5	PH1 PH2	PZ1 PZ2 SL/PZ1 SL/PZ2	T10 T15 T20 T25	**705162** 0016	60,65

7113

felo *E-smart* VDE screwdriver set

- 12 replaceable blades and two-component handle
- Locking mechanism ensures blades are securely held
- Snap-on twist cap and soft-grip zone
- **Safety tool in accordance with DIN EN 60900 all parts individually tested at 10,000 V**
- Sturdy, non-slip strongbox

Can be used as a screwdriver or fine tool!

Contents	Slot mm	PH	PZ	TORX	art.no.	€
1 handle; 1 twist cap; 12 blades	2.5 3.0 3.5 4.0 5.5 6.5	PH1 PH2	PZ2	T10 T15 T20	**705169** 0014	67,40

7112

Switch cabinet key

- Various key sizes
- Incl. square venting key
- **Material:** Die-cast zinc

701533 7272

701533 9060

Interior quadratic mm	External quadratic mm	Interior triangle mm	Lever lock mm	Double-bit slot/PH	Plastic adapter	art.no.	€
6 / 7 - 8	-	8	3 - 5	1 x 7 / PH2	1/4"	**701533** 7272	16,95
7 / 8	4 - 10	8 - 9	-	1 x 7 / PH2	1/4"	701533 9060	13,45

7101

ATORN® Screwdrivers in a hand-held fold-out holder

- 2-component hand-held fold-out holder with lifting device
- Keys made from hardened chrome vanadium steel

703055 0010

703055 0020

703055 0030

Contents	Six-edged mm	TORX		art.no.	€
7 pieces; nickel-plated	1.5 - 2 - 2.5 - 3 - 4 - 5 - 6	-	⬢	**703055** 0010	11,80
7 pieces; nickel-plated	2.5 - 3 - 4 - 5 - 6 - 8 - 10	-	⬢	703055 0020	12,20
8 pieces; steel grey	-	T9 - T10 - T15 - T20 - T25 - T27 - T30 - T40	✱	703055 0030	18,20

7111

...dreams come true.

ATORN®
High quality for great performance

felo Bit holder

Extra-strong hold

feloStar automatic holder

- **Genuine one-handed operation**
- Holds bit and screw securely
- Adjusts automatically to the depth of the screw head
- For 6.35 mm (1/4") screwdriver bits
- Extra-strong neodymium ring magnet to hold screws securely

suitable for	Total length mm	art.no.	€
Type C6.3 and E6.3 bits	70	**702553** 0104	19,05
		7106	

Magnetic holder

- **For machine holding fixtures**
- Stainless steel sleeve, for 6.35 mm (1/4") screwdriver bits

702550 0104

702550 1104

suitable for	Total length mm	art.no.	€
Type C6.3 and E6.3 bits	58	**702550** 0104	3,45
Type C6.3 and E6.3 bits	74	702550 1104	5,60
		7106	

wiha CentroFix SuperSlim bit holder

- Robust aluminium operating sleeve
- For bits in accordance with DIN 3126, ISO 1173 type C6.3 and E6.3
- Drive: DIN 3126, ISO 1173 type E6.3
- Packaging: Plastic box, reusable and dust-proof
- SelfLock - bit is automatically locked on insertion
- EasyOut - simple bit removal with ejector function
- With neodymium magnet

suitable for	Length mm	art.no.	€
Type C6.3 and E6.3 bits, DIN 3126, ISO 1173	66	**702554** 0104	11,10
		7106	

felo Bit holder screwdriver

- **With magnet**
- For 6.35 mm (1/4") screwdriver bits
- Ergonomic 2-component handle

702540 0104

702540 1104

Design	Total length mm	art.no.	€
Standard	199	**702540** 0104	10,65
VDE	204	702540 1104	11,10
		7106	

wiha LiftUp 25 magazine bit holder

- Blade made from high-quality chrome vanadium steel, through-hardened
- Ergonomic Wiha SoftFinish multi-component handle with slip protection
- Bit holding fixture made from stainless steel, with strong neodymium permanent magnets
- Output: DIN 3126, ISO 1173 type D6.3
- For 25 mm standard bits
- Compact 12-bit storage inside the handle

The alternative to screwdriver sets!

Contents	Slot mm	PH	PZ	TORX	art.no.	€
13 pieces	4.5 / 6.5	PH1 / PH2 / PH3	PZ1 / PZ2 / PZ3	T15 / T20 / T25 / T30	**702544** 0001	31,30
13 pieces	-	PH1 / PH2 / PH3	PZ1 / PZ2 / PZ3	T10 / T15 / T20 / T25 / T30 / T40	702544 0002	31,10
					7110	

wiha Screwdriver bits, C6.3

DIN 3126 | ISO 1173

- **Type C6.3** hexagonal connector, 6.35 mm (1/4")
- **Standard bit:** Chrome vanadium steel, through-hardened
  Torsion bit: Chrome vanadium steel, through-hardened, tough, torsion zone for protection against torque peaks, particularly suitable for hard screw joints
- Unit prices when purchased in packs

Flat head

Slot mm	Total length mm	Standard bit art.no.	€	Torsion bit art.no.	€
0.6 x 4.5	25	**702501** 0045	0,81	**702503** 0645	1,39
0.8 x 5.5	25	702501 0055	0,81	702503 0855	1,39
		7106		7106	

Slot mm	Total length mm	Standard bit art.no.	€	Torsion bit art.no.	€
1.2 x 6.5	25	702501 0065	0,81	702503 1265	1,39
1.6 x 8.0	25	702501 0180	0,81		
		7106		7106	

Cross head (PHILLIPS), short

PH	Total length mm		Standard bit art.no.	€		Torsion bit art.no.	€
PH1	25	10	**702505** 0001	0,45	10	**702507** 0001	0,73
PH2	25	10	702505 0002	0,45	10	702507 0002	0,73
PH3	25	10	702505 0003	0,45	10	702507 0003	0,73
			7106			7106	

Cross head (PHILLIPS), long

PH	Total length mm		Torsion bit art.no.	€
PH1	50	10	**702527** 0001	1,76
PH2	50	10	702527 0002	1,76
PH3	50	10	702527 0003	1,76
			7106	

POZIDRIV, short

PZ	Total length mm		Standard bit art.no.	€		Torsion bit art.no.	€
PZ1	25	10	**702510** 0001	0,45	10	**702512** 0001	0,73
PZ2	25	10	702510 0002	0,45	10	702512 0002	0,73
PZ3	25	10	702510 0003	0,45	10	702512 0003	0,73
			7106			7106	

POZIDRIV, long

PZ	Total length mm		Torsion bit art.no.	€
PZ1	50	10	**702515** 0001	1,76
PZ2	50	10	702515 0002	1,76
PZ3	50	10	702515 0003	1,76
			7106	

TORX

TORX	Total length mm		Standard bit art.no.	€		Torsion bit art.no.	€
T6	25	10	**702520** 0006	0,73			
T7	25	10	702520 0007	0,73			
T8	25	10	702520 0008	0,73			
T9	25	10	702520 0009	0,73			
T10	25	10	702520 0010	0,73	10	**702522** 0010	1,19
T15	25	10	702520 0015	0,73	10	702522 0015	1,19
T20	25	10	702520 0020	0,73	10	702522 0020	1,19
T25	25	10	702520 0025	0,73	10	702522 0025	1,19
T27	25	10	702520 0027	0,73	10	702522 0027	1,19
T30	25	10	702520 0030	0,73	10	702522 0030	1,19
T40	25	10	702520 0040	0,70	10	702522 0040	1,19
			7106			7106	

Security TORX

TORX	Total length mm		Standard bit art.no.	€
TR10	25	10	**702516** 0010	1,88
TR15	25	10	702516 0015	1,88
TR20	25	10	702516 0020	1,88
TR25	25	10	702516 0025	1,88
TR27	25	10	702516 0027	1,88
TR30	25	10	702516 0030	1,88
TR40	25	10	702516 0040	1,88
			7106	

Hex

Interior hexagon mm	Total length mm		Standard bit art.no.	€
1.5	25	10	**702515** 0015	1,80
2.0	25	10	702515 0020	1,80
2.5	25	10	702515 0025	1,80
3.0	25	10	702515 0030	1,80
4.0	25	10	702515 0040	1,80
			7106	

Interior hexagon mm	Total length mm		Standard bit art.no.	€
5.0	25	10	702515 0050	1,80
6.0	25	10	702515 0060	1,80
8.0	30	10	702515 0080	2,24
10.0	30	10	702515 0100	2,36
			7106	

wiha Screwdriver bits, E6.3

DIN 3126 | ISO 1173

- **Type E6.3** hexagonal connector, 6.35 mm (1/4")
- **Standard bit:** Chrome vanadium steel, through-hardened
- Unit prices when purchased in packs

Flat head

Slot mm	Total length mm		Professional bit art.no.	€
0.5 x 3.0	50	10	**702601** 0530	2,64
0.6 x 3.5	50	10	702601 0635	2,64
0.8 x 4.0	50	10	702601 0840	2,64
1.0 x 5.5	50	10	702601 1050	2,64
1.2 x 6.5	50	10	702601 1265	2,64

7106

Hex

Interior hexagon mm	Total length mm		Professional bit art.no.	€
3.0	50	10	**702620** 5003	2,64
4.0	50	10	702620 5004	2,64
5.0	50	10	702620 5005	2,64
6.0	50	10	702620 5006	2,64
8.0	50	10	702620 5008	4,48

7106

TORX

TORX	Total length mm		Professional bit art.no.	€
T10	50	10	**702615** 5010	2,64
T15	50	10	702615 5015	2,64
T20	50	10	702615 5020	2,64
T25	50	10	702615 5025	2,64
T27	50	10	702615 5027	2,64
T30	50	10	702615 5030	2,64
T40	50	10	702615 5040	2,64

7106

Cross head (PHILLIPS)

PH	Total length mm		Professional bit art.no.	€
PH1	70	10	**702605** 5001	3,24
PH2	70	10	702605 5002	3,24
PH3	70	10	702605 5003	3,24

7106

POZIDRIV + SUPADRIV

PZ	Total length mm		Professional bit art.no.	€
PZ1	70	10	**702610** 5001	3,24
PZ2	70	10	702610 5002	3,24
PZ3	70	10	702610 5003	3,24

7106

ATORN® Bit range

Bit box with premium bit holder and handle

Contents	Interior hexagon mm	Slot mm	PH	PZ	TORX	art.no.	€
32 pieces 1 handle with 1/4" holding fixture 1 CentroFix premium bit holder	1x 4.0 1x 5.0 1x 6.0	1x 4.5 1x 5.5 1x 6.5	1x PH1 5x PH3	2x PZ1 5x PZ2 2x PZ3	1x T10 / 1x T15 1x T20 / 1x T25 1x T30 / 1x T40	**702565** 0032	39,–
32 pieces 1 handle with 1/4" holding fixture 1 CentroFix premium bit holder	-	-	2x PH1 5x PH2 2x PH3	2x PZ1 5x PZ2 2x PZ3	2x T10 / 2x T15 2x T20 / 2x T25 2x T30 / 2x T40	702565 1032	39,–

7106

Bit box with premium bit holder

Contents	Interior hexagon mm	Slot mm	PH	PZ	TORX	art.no.	€
61 pieces 1 CentroFix premium bit holder	2x 3.0 2x 4.0 2x 5.0 2x 6.0	1x 4.5 1x 5.5 1x 6.5 1x 8.0	4x PH1 10x PH2 4x PH3	4x PZ1 10x PZ2 4x PZ3	2x T10 / 2x T15 2x T20 / 2x T25 2x T30 / 2x T40	**702566** 0061	51,–

7106

Bit box with bit holder

Contents	Interior hexagon mm	Slot mm	PH	PZ	TORX	art.no.	€
17 pieces 1 bit holder	1x 3.0 1x 4.0 1x 5.0	1x 4.5 1x 6.5	1x PH1 1x PH2 1x PH3	1x PZ1 1x PZ2 1x PZ3	1x T10 / 1x T15 1x T20 / 1x T25 1x T30	**702567** 0017	17,–
17 pieces 1 bit holder			1x PH1 2x PH2 1x PH3	1x PZ1 2x PZ2 1x PZ3	1x T10 / 1x T15 2x T20 / 2x T25 1x T30 / 1x T40	702567 1017	15,80

7106

Bit holder

Description	art.no.	€
CentroFix bit holder, 1/4" x 60 mm, for C and E6.3 drives	**702568** 0001	14,–
Quick release holder, 1/4" x 60 mm, for C6.3 drive	702568 0002	4,40
Magnetic bit holder screwdriver, 1/4" x 125 mm, for C6.3 drive	702568 0003	12,–
Bit holder screwdriver, 1/4" fixture for interchangeable holder	702568 0004	10,–

7106

702568 0001

702568 0003

702568 0004

wiha FlipSelector bit sets

- Box made from shock-proof fibreglass-reinforced polyamide – durably rugged
- Bit clamping element can be swivelled 180°
- Extra folding section for magnetic bit holder
- 1/4" universal holder, magnetic, type E6.3
- Simply slide the Wiha logo down, and the bits are ready to remove
- Always to hand - fits easily in a trouser pocket or belt clip (see **BitBuddy** accessories)

702572 0003

Contents	Slot mm	PH	PZ	TORX	art.no.	€
13 pieces incl. 1 bit holder	5.5	PH1 3x PH2 PH3	PZ1 4x PZ2 PZ3	-	**702572** 0001	14,65
13 pieces incl. 1 bit holder	-	-	-	T7 T8 T9 T10 2x T15 2x T20 2x T25 T30 T40	702572 0002	18,20
13 pieces incl. 1 bit holder	-	2x PH2	PZ1 2x PZ2 PZ3	T10 T15 T20 T25 T30 T40	702572 0003	16,50

7106

wiha BitBuddy torsion bit sets

- Box made from shock-proof fibreglass-reinforced polyamide – durably robust
- Ideal for frequently changing screw applications within a single trade
- Always to hand - fits easily in a trouser pocket or belt clip
- Individually tailored to the profile, max. long torsion zone
- Precision-milled profile for a perfect fit and maximum power

Magnetic

MaxxTor bits with a length of 29 mm

- At least 30 % more torsion and twice the lifespan of the best T25 x 29 high-performance impact bits available on the market
- Up to 3x longer life than commercially available standard bits

Contents	Six-edged mm	PH	TORX	PZ	art.no.	€
8 pieces incl. 1 bit holder	2 x 3.0 2 x 4.0 2 x 5.0 6.0	-	-	-	**702564** 0001	25,60
8 pieces incl. 1 bit holder	-	-	T10 T15 2x T20 T25 T30 T40	-	702564 0002	25,60
8 pieces incl. 1 bit holder	-	PH2	T15 T20 T25	PZ1 PZ2 PZ3	702564 0003	24,–

7106

MaxxTor bits with a length of 49 mm

- 70 % longer life than the best T25 x 50 high-performance impact bits available on the market

Contents	Six-edged mm	PH	TORX	PZ	art.no.	€
7 pieces	2 x 3.0 2 x 4.0 2 x 5.0 6.0	-	-	-	**702571** 0001	30,65
7 pieces	-	-	T10 T15 2x T20 T25 T30 T40	-	702571 0002	30,65
7 pieces	-	PH2	T15 T20 T25	PZ1 PZ2 PZ3	702571 0003	28,90

7106

Accessories

- Compatible with **BitBuddy** and **FlipSelector** bit sets

Description	art.no.	€
Belt clip, shock-proof plastic	**702570** 0001	2,88

7106

Tube spanner

DIN 896B

- Precision steel tube with hexagonal head
- Can be operated with a cross bar or open-end spanner
- Through-drilled, chrome-plated

Wr. width mm	Total length mm	Hole Ø mm	Weight kg	art.no.	€
6 x 7	100	5	0.03	**701510** 0607	4,10
8 x 9	100	6	0.035	701510 0809	4,50
8 x 10	120	6	0.05	701510 0810	4,50
10 x 11	120	6	0.05	701510 1011	4,90
12 x 13	140	8	0.07	701510 1213	5,25
13 x 17	150	10	0.125	701510 1317	7,60
14 x 17	150	10	0.13	701510 1417	7,60
16 x 17	150	10	0.13	701510 1617	7,60
17 x 19	160	12	0.2	701510 1719	8,40
18 x 19	160	12	0.2	701510 1819	8,40

7101

Wr. width mm	Total length mm	Hole Ø mm	Weight kg	art.no.	€
20 x 22	170	12	0.235	701510 2022	10,25
21 x 23	170	14	0.25	701510 2123	11,80
22 x 24	185	14	0.28	701510 2224	11,80
24 x 27	185	14	0.285	701510 2427	13,50
25 x 28	205	16	0.325	701510 2528	16,05
27 x 32	205	16	0.415	701510 2732	18,95
30 x 32	205	16	0.38	701510 3032	18,95
32 x 36	225	18	0.54	701510 3236	23,95
36 x 41	225	18	0.59	701510 3641	31,75
41 x 46	245	20	0.835	701510 4146	48,40

7101

Tube spanner set, DIN 896 Type B, ISO 2236/ISO 1085

Contents	Wr. width mm	art.no.	€
8 pieces	6x7 - 8x9 - 10x11 - 12x13 - 14x15 - 16x17 - 18x19 - 20x22	**701515** 0008	51,30

7101

Cross bar, DIN 900

- Fits tube spanners with corresponding bore diameters

Length mm	Ø mm	art.no.	€
125	5	**701525** 0125	1,30
160	6	701525 0160	2,–
180	8	701525 0180	2,45
200	10	701525 0200	3,40
250	12	701525 0250	4,85

7101

Length mm	Ø mm	art.no.	€
320	14	701525 0320	6,90
400	16	701525 0400	10,50
500	18	701525 0500	19,45
630	20	701525 0630	39,90

7101

Stepped cross bar, DIN 900

- Chrome-plated and through-hardened

Length mm	Ø mm	art.no.	€
280	5 / 6 / 8 / 10 / 12	**701520** 0280	8,95

7101

felo Socket tool

DIN 3125

2-component plastic handles

- Blade made from chrome molybdenum vanadium steel
- Slip protection
- Horizontal hanging hole

Wr. width mm	Blade length mm	Handle length mm	art.no.	€
5	125	90	**701530** 0050	8,90
5.5	125	90	701530 0055	9,15
6	125	90	701530 0060	9,35
7	125	99	701530 0070	11,30
8	125	99	701530 0080	11,80
9	125	99	701530 0090	12,05
10	125	99	701530 0100	12,15
11	125	105	701530 0110	13,70
12	125	105	701530 0120	13,70
13	125	105	701530 0130	14,10
14	125	105	701530 0140	14,35

7112

With gel cushion effect

3-component plastic handle

- Flexible blade
- The first handle that adjusts to fit your hand!

Wr. width mm	Blade length mm	Handle length mm	art.no.	€
5	170	106	**701531** 0050	20,25
6	170	106	701531 0060	20,50
7	170	106	701531 0070	20,90
8	170	106	701531 0080	20,90

7112

ATORN® Sockets

1/4"

- **Chrome vanadium steel, chrome-plated, with a pin hole**
- Hexagonal version with special profile for higher torques
- Optimum force transmission and screw protection

Hexagonal socket, 1/4", DIN 3124

Wr. width mm	Length mm	art.no.	€
4	25	**702108** 0040	3,15
4.5	25	702108 0045	*3,15*
5	25	702108 0050	3,30
5.5	25	702108 0055	3,30
6	25	702108 0060	3,30
7	25	702108 0070	3,30
8	25	702108 0080	3,30
9	25	702108 0090	3,45
10	25	702108 0100	3,45
11	25	702108 0110	3,45
12	25	702108 0120	3,60
13	25	702108 0130	3,60
14	25	702108 0140	3,80

7102

Hexagonal socket, 1/4", long

Wr. width mm	Length mm	art.no.	€
4	50	**702109** 0040	8,20
4.5	50	702109 0045	*8,40*
5	50	702109 0050	*8,40*
5.5	50	702109 0055	*8,40*
6	50	702109 0060	*8,40*
7	50	702109 0070	8,40
8	50	702109 0080	8,40
9	50	702109 0090	*8,80*
10	50	702109 0100	8,40
11	50	702109 0110	8,80
12	50	702109 0120	8,80
13	50	702109 0130	9,20
14	50	702109 0140	*10,–*

7102

Hex bit, 1/4"

Wr. width mm	Length mm	art.no.	€
3	37	**702110** 0030	5,20
4	37	702110 0040	5,20
5	37	702110 0050	5,20
6	37	702110 0060	5,20
8	37	702110 0080	5,60

7102

TORX bit, 1/4"

TORX	Length mm	art.no.	€
T10	37	**702111** 0100	6,–
T15	37	702111 0150	6,–
T20	37	702111 0200	6,–
T25	37	702111 0250	6,–
T27	37	702111 0270	6,–
T30	37	702111 0300	6,–
T40	37	702111 0400	6,80
T8	37	702111 0080	6,–
T9	37	702111 0090	6,–

7102

TORX socket, 1/4"

TORX	Length mm	art.no.	€
E 4	25	**702112** 0040	*4,65*
E 5	25	702112 0050	*4,65*
E 6	25	702112 0060	*4,65*
E 7	25	702112 0070	*4,65*
E 8	25	702112 0080	4,65
E10	25	702112 0100	*5,20*

7102

Flat head, 1/4"

Slot mm	Length mm	art.no.	€
0.8 x 4.0	37	**702113** 0040	4,90
1.0 x 5.5	37	702113 0055	4,90
1.2 x 6.5	37	702113 0065	*4,90*

7102

Cross head (Phillips), 1/4"

PH	Length mm	art.no.	€
PH1	37	**702114** 0010	4,90
PH2	37	702114 0020	4,90
PH3	37	702114 0030	*4,90*

7102

Pozidriv, 1/4"

PZ	Length mm	art.no.	€
PZ1	37	**702115** 0010	5,60
PZ2	37	702115 0020	5,60
PZ3	37	702115 0030	*5,60*

7102

ATORN® Drives and connectors

1/4"

Designation	Length mm	art.no.	€
Reversible ratchet	150	**702010** 0014	37,20
Handle with slide block	120	702010 0006	7,40
Adapter, 1/4" internal x 3/8" external	26	702010 0007	6,80
Cardan joint	40	702010 0004	16,20
Extension	50	702010 0002	5,20
Extension	105	702010 0003	5,40
Extension	150	702010 0035	6,–

7102

702010 0014

702010 0006

702010 0002

702010 0007

702010 0004

ATORN® Sockets

3/8″

- **Chrome vanadium steel, chrome-plated, with a pin hole**
- Hexagonal version with special profile for higher torques
- Optimum force transmission and screw protection

Hexagonal socket, 3/8″

Wr. width mm	Length mm	art.no.	€
6	27	**702128** 0006	4,85
7	27	702128 0007	*4,85*
8	27	702128 0008	4,85
9	27	702128 0009	4,85
10	27	702128 0010	4,85
11	27	702128 0011	4,85
12	27	702128 0012	4,85
13	27	702128 0013	4,85
14	27	702128 0014	*5,–*
15	27	702128 0015	*5,–*
16	27	702128 0016	*5,–*
17	30	702128 0017	5,–
18	30	702128 0018	*5,–*
19	30	702128 0019	5,–
20	30	702128 0020	*5,60*
21	30	702128 0021	5,60
22	30	702128 0022	5,60

7102

Hex bit, 3/8″

Wr. width mm	Length mm	art.no.	€
3	47	**702130** 0030	5,40
4	47	702130 0040	5,40
5	47	702130 0050	5,40
6	47	702130 0060	5,40
7	47	702130 0070	5,40
8	47	702130 0080	5,40
9	47	702130 0090	5,40
10	47	702130 0100	5,40
12	47	702130 0120	10,40

7102

TORX bit, 3/8″

TORX	Length mm	art.no.	€
T20	47	**702131** 0200	7,40
T25	47	702131 0250	7,40
T27	47	702131 0270	7,40
T30	47	702131 0300	7,40
T40	47	702131 0400	7,40
T45	47	702131 0450	7,40
T50	47	702131 0500	7,40

7102

TORX socket, 3/8″

TORX	Length mm	art.no.	€
EX5	27	**702132** 0050	*7,20*
EX6	27	702132 0060	*7,20*
EX7	27	702132 0070	*7,20*
EX8	27	702132 0080	7,20
EX10	27	702132 0100	7,20
EX11	27	702132 0110	7,20
EX12	27	702132 0120	*7,20*
EX14	27	702132 0140	7,20

7102

Flat head, 3/8″

Slot mm	Length mm	art.no.	€
1.0 x 5.5	49	**702133** 0055	7,30
1.2 x 8.0	49	702133 0080	7,30
1.6 x 10.0	49	702133 0100	*8,60*

7102

Cross head (Phillips), 3/8″

PH	Length mm	art.no.	€
PH1	49	**702134** 0010	7,30
PH2	49	702134 0020	7,30
PH3	49	702134 0030	*7,30*

7102

ATORN® Drives and connectors

3/8″

Designation	Length mm	art.no.	€
Lever-reversible ratchet	190	**702030** 0038	48,–
Handle with slide block	163	702030 0010	9,60
Adapter, 3/8″ internal x 1/4″ external	29	702030 0007	6,60
Adapter, 3/8″ internal x 1/2″ external	36	702030 0008	6,60
Cardan joint	55	702030 0006	19,–
Extension	50	702030 0009	7,80
Extension	75	702030 0002	6,80
Extension	125	702030 0003	7,80
Extension	150	702030 0004	*9,60*
Extension	250	702030 0005	11,–

7102

702030 0038

702030 0010

702030 0002

702030 0007

702030 0006

1/2"

- **Chrome vanadium steel, chrome-plated, with a pin hole**
- Hexagonal version with special profile for higher torques
- Optimum force transmission and screw protection

Hexagonal socket, 1/2", DIN 3124

Wr. width mm	Length mm	art.no.	€
8	38	**702148** 0008	5,20
9	38	702148 0009	5,20
10	38	702148 0010	4,50
11	38	702148 0011	4,80
12	38	702148 0012	4,80
13	38	702148 0013	4,50
14	38	702148 0014	4,90
15	38	702148 0015	4,90
16	38	702148 0016	4,90
17	38	702148 0017	5,20
18	38	702148 0018	5,60
19	38	702148 0019	5,20
20	38	702148 0020	6,–
21	38	702148 0021	6,60
22	38	702148 0022	6,–
23	40	702148 0023	6,60
24	40	702148 0024	6,60
26	42	702148 0026	7,20
27	42	702148 0027	8,–
28	42	702148 0028	8,80
30	45	702148 0030	9,–
32	45	702148 0032	9,–

7102

12-point socket, 1/2", long

Wr. width mm	Length mm	art.no.	€
10	75	**702149** 0010	11,80
11	75	702149 0011	11,80
12	75	702149 0012	11,80
13	75	702149 0013	11,80
14	75	702149 0014	12,40
15	75	702149 0015	13,20
16	75	702149 0016	13,20
17	75	702149 0017	13,20
18	75	702149 0018	14,–
19	75	702149 0019	13,20
20	75	702149 0020	*13,80*
21	75	702149 0021	*14,–*
22	75	702149 0022	14,20
23	75	702149 0023	15,10
24	75	702149 0024	14,40
26	75	702149 0026	*14,60*
27	75	702149 0027	15,80
30	75	702149 0030	16,40
32	75	702149 0032	17,60

7102

Hex bit, 1/2"

Wr. width mm	Length mm	art.no.	€
4	57	**702150** 0040	5,60
5	57	702150 0050	5,60
6	57	702150 0060	5,60
7	57	702150 0070	5,60
8	57	702150 0080	5,60
10	57	702150 0100	6,60
12	57	702150 0120	6,60
14	57	702150 0140	8,–
17	57	702150 0170	8,80
19	57	702150 0190	9,60

7102

TORX bit, 1/2"

TORX	Length mm	art.no.	€
T20	56	**702151** 0200	8,40
T25	56	702151 0250	8,40
T27	56	702151 0270	*8,40*
T30	56	702151 0300	8,40
T40	56	702151 0400	9,60
T45	56	702151 0450	9,60
T50	56	702151 0500	9,60
T55	56	702151 0550	12,40
T60	56	702151 0600	12,40

7102

TORX bit, 1/2", long

TORX	Length mm	art.no.	€
T20	110	**702156** 0200	*10,–*
T25	110	702156 0250	*10,–*
T27	110	702156 0270	*10,–*
T30	110	702156 0300	*10,–*
T40	110	702156 0400	*11,40*
T45	110	702156 0450	*11,40*
T50	110	702156 0500	11,40
T55	110	702156 0550	*14,40*
T60	110	702156 0600	*14,40*

7102

TORX socket, 1/2"

TORX	Length mm	art.no.	€
EX10	38	**702152** 0100	*7,40*
EX11	38	702152 0110	7,40
EX12	38	702152 0120	*7,40*
EX14	38	702152 0140	8,–
EX16	38	702152 0160	8,–
EX18	38	702152 0180	8,40
EX20	38	702152 0200	8,40
EX22	38	702152 0220	9,20
EX24	40	702152 0240	11,60

7102

Flat head, 1/2"

Slot mm	Length mm	art.no.	€
1.2 x 8.0	56	**702153** 0080	*9,40*
1.6 x 10.0	56	702153 0100	9,40
2.0 x 12.0	56	702153 0120	9,80
2.5 x 14.0	58	702153 0140	10,80

7102

Cross head (PH Phillips), 1/2"

PH	Length mm	art.no.	€
PH2	56	**702154** 0020	9,–
PH3	56	702154 0030	9,20
PH4	56	702154 0040	9,40

7102

Cross head (PZ Pozidriv), 1/2"

PZ	Length mm	art.no.	€
PZ2	56	**702155** 0020	9,–
PZ3	56	702155 0030	9,20
PZ4	56	702155 0040	9,40

7102

ATORN® Drives and connectors

1/2″

702060 0013

702060 0008

Designation	Length mm	art.no.	€
Reversible ratchet	255	**702060** 0013	51,–
Handle with slide block	300	702060 0008	10,80
Adapter, 1/2″ internal x 3/8″ external	38	702060 0009	7,–
Adapter, 1/2″ internal x 3/4″ external	49	702060 0010	9,–
Cardan joint	75	702060 0005	19,20
Spark plug insert	16	702060 0011	7,35
Spark plug insert	21	702060 0012	*8,90*
Extension	75	702060 0002	7,60
Extension	125	702060 0025	8,–
Extension	250	702060 0035	10,60

7102

702060 0005

702060 0009

702060 0025

702060 0011

ATORN® Socket sets

1/4″

6-kant Spezial Profil

- Sheet steel box, powder-coated
- With two-colour foam inlay and removable trays
- Hexagonal with special profile for higher torques
- Optimum force transmission and screw protection

702205 1418

702205 1428

702205 1442

Contents	Six-edged mm	Interior hexagon mm	Slot mm	PH	PZ	TORX	Dimensions W x D x H mm	Weight g	art.no.	€
18 pieces 1x reversible ratchet, 150 mm 1x Cardan joint, 40 mm 2x extensions, 50 / 105 mm 1x handle with slide block	4 / 4.5 / 5 / 5.5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14	-	-	-	-	-	225 x 130 x 37	Approx. 1,030	**702205** 1418	110,–
28 pieces 1x reversible ratchet, 150 mm 1x Cardan joint, 40 mm 1x extension, 50 mm 1x handle with slide block	4 / 4.5 / 5 / 5.5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13	3 / 4 / 5 / 6 / 8	4 / 5.5 / 6.5	PH1 / PH2	PZ1 / PZ2	-	225 x 130 x 37	Approx. 1,140	702205 1428	128,–
42 pieces 1x reversible ratchet, 150 mm 1x Cardan joint, 40 mm 2x extensions, 50 / 105 mm 1x handle with slide block	4 / 4.5 / 5 / 5.5 / 6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 long: 8 / 10 / 11 / 13	3 / 4 / 5 / 6 / 8	4 / 5.5 / 6.5	PH1 / PH2 / PH3	PZ1 / PZ2 / PZ3	T10 / T15 / T20 / T25 / T30 / T40	320 x 130 x 47	Approx. 1,760	702205 1442	174,–

7102

ATORN® Socket set

3/8″

- Sheet steel box, powder-coated
- With two-colour foam inlay and removable trays
- Hexagonal with special profile for higher torques
- Optimum force transmission and screw protection

Contents	Six-edged mm	Dimensions W x D x H mm	Weight g	art.no.	€
22 pieces 1x reversible ratchet, 190 mm 1x Cardan joint, 55 mm 3x extensions, 50 / 75 / 150 mm 1x adapter, 1/2″ x 3/8″	6 / 7 / 8 / 9 / 10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 18 / 19 / 20 / 21 / 22	320 x 130 x 47	2,080	**702209** 3823	172,–

7102

ATORN® Socket sets

1/2″

- Sheet steel box, powder-coated
- With two-colour foam inlay and removable trays
- Hexagonal with special profile for higher torques
- Optimum force transmission and screw protection

702214 1219

702214 1222

702214 1235

Contents	Weight g	Six-edged mm	Interior hexagon mm	PH	Dimensions W x D x H mm	TORX	art.no.	€
19 pieces 1x reversible ratchet, 255 mm 1x Cardan joint, 75 mm 2x extensions, 125 / 250 mm 1x handle with slide block	Approx. 4,420	10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 19 / 22 / 24 / 27 / 30 / 32	-	-	455 x 180 x 51	-	**702214** 1219	182,–
22 pieces spark plug sockets, 16 / 21 mm 1x reversible ratchet, 255 mm 1x Cardan joint, 75 mm 2x extensions, 125 / 250 mm 1x adapter, 1/2″ x 3/8″	Approx. 4,352	10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 18 / 19 / 22 / 24 / 27 / 30 / 32	-	-	455 x 180 x 51	-	702214 1222	192,–
35 pieces 1x reversible ratchet, 255 mm 1x Cardan joint, 75 mm 2x extensions, 125 / 250 mm 1x adapter, 1/2″ x 3/8″	Approx. 5,234	10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 18 / 19 / 20 / 21 / 22 / 23 / 24 / 27 / 30 / 32	7 / 8 / 10 / 12 / 14	PH3 / PH4	455 x 180 x 51	T30 / T40 / T45 / T55 / T60	702214 1235	258,–

7102

STAHLWILLE® Socket sets

1/4″ 1/2″

- **STAHLWILLE** ratchets, connectors and inserts are quite simply the trusted choice for professionals
- All metal parts made from high-quality steel (chrome alloy steel, chrome-plated)
- Socket tool and connectors fit together securely and unfasten easily
- Ergonomically shaped 2-component handle made from shock-proof, Skydrol-resistant plastic
- Ergonomic lever to switch between clockwise and anti-clockwise rotation

Socket set, 1/4″ + 1/2″

Contents	Six-edged mm	Interior hexagon mm	art.no.	€
38 pieces in a sheet steel box 2 ratchets 4 extensions (54 / 130 / 150 / 255 mm) 2 Cardan joints 1 drive handle 2 T-handles	4 / 5 / 5.5 / 6 / 7 / 8 / 9 / 10 / 11 / 13 / 16 / 17 / 18 / 19 / 21 / 22 / 24 / 27 / 30	3 / 4 / 5 / 6 / 8 / 10 / 12 / 14	**702040** 0038	419,95

7168

Socket set, 1/2″

- Double hex inserts

Contents	Six-edged mm	Interior hexagon mm	art.no.	€
31 pieces in a sheet steel box 1 ratchet 3 extensions (75 / 130 / 255 mm) 1 T-handle 1 Cardan joint	8 / 10 / 11 / 12 / 13 / 14 / 15 / 16 / 17 / 18 / 19 / 21 / 22 / 24 / 27 / 30 / 32	4 / 5 / 6 / 7 / 8 / 10 / 12 / 14	**702041** 0031	359,95

7168

Socket set

1/4" 1/2"

- **82 pieces**
- Matt satin chrome-plated finish
- Sturdy plastic case
- **Contents:**

13x Superlock 1/4" sockets: 4 to 14 mm AF
12x Superlock 1/2" sockets: 14 to 32 mm AF
2x 1/2" spark plug sockets: 16 + 21 mm
17x 1/4" bit sockets:
3x flat head, 4.0 - 5.5 - 7.0 mm
2x PHILLIPS® PH1 - PH2
2x POZIDRIV® PZ1 - PZ2
4x hex, 3.0 - 4.0 - 5.0 - 6.0 mm
6x TORX® T8 - T10 - T15 - T20 - T25 - T30
15x 5/16" bits:
3x flat head, 8.0 - 10.0 - 12.0 mm
2x PHILLIPS® PH3 - PH4
2x POZIDRIV®PZ3 - PZ4
4x hex, 8.0 - 10.0 - 12.0 - 14.0 mm
4x TORX® T40 - T45 - T50 - T55
1x 1/4" extension, 50 mm, milled
1x 1/4" extension, 100 mm, milled
1x 1/4" extension, flexible, 150 mm
1x square screwdriver, 1/4" with 1/4" square socket
1x 1/4" Cardan joint
1x T-grip with slide block, 1/4"
1x socket adapter, 1/4" square with 1/4" hexagonal drive
1x reversible ratchet, 1/4", length 145 mm
1x 1/2" extension, 125 mm, milled
1x 1/2" extension, 250 mm, milled
1x slide block for 1/2" extension and 3/8" x 1/2" enlargement adapter
1x 1/2" Cardan joint
1x bit adapter socket, 1/2" x 5/16"
1x reversible ratchet, 1/2", length 250 mm
9x combination spanners:
8 - 10 - 11 - 12 - 13 - 14 - 17 - 19 - 22 mm AF

Contents	art.no.	€
82 pieces	**702107** 0082	179,–
	7101	

felo ERGONIC socket set

1/4"

- **Extremely strong switching mechanism with super-fine toothing (> 65 Nm, 72 teeth, 5° return angle)**
- Socket tool safety lock (with push-button release)
- Handle permanently attached to the forged component
- Patented ERGONIC handle with cushion effect for maximum comfort
- Various application-specific assortments in a sturdy and secure StrongBox
- High-quality and durable: 15-year guarantee with every item

With super-fine serration

Contents	Six-edged mm	Interior hexagon mm	Slot mm	PH	PZ	TORX	art.no.	€
1/4", 36 pieces 1x ERGONIC ratchet 1x ERGONIC stubby 2x extensions, 50 and 100 mm 1x Cardan joint 1x bit holder, E6.3 x 58 mm 1x adapter, E6.3 - 1/4" (50 mm) 1x adapter, 1/4" SQ - 1/4" hex	4 4.5 5 5.5 6 7 8 9 10 11 12 13 14	4.0 5.0 6.0	4.5 x 0.6 5.5 x 1.0	1 2 3	1 2	T10 T15 T20 T25 T30	**702003** 0036	77,90
							7112	

ATORN® Torque screwdriver

- Simple and precise torque adjustment
- Precise release when the set torque is reached, clearly audible and tangible
- Blades made from chrome molybdenum vanadium alloy
- Ergonomic 2-component handle
- Replaceable blades for maximum flexibility in all application areas
- Other set configurations and individual blades available on request!

Torque handle

- Incl. adjustment key, user manual and calibration certificate

Torque N-m	art.no.	€
0.6 - 1.5	**702732** 0615	44,60
1.5 - 3.0	702732 1530	44,60
3.0 - 5.4	702732 3054	44,60

7109

Replaceable blades

- Black tip for a precise fit

Description	Length mm	Hexagonal support in	art.no.	€
Torx T6	170	1/4	**702733** 0060	4,05
Torx T7	170	1/4	702733 0070	4,05
Torx T8	170	1/4	702733 0080	4,05
Torx T9	170	1/4	702733 0090	4,05
Torx T10	170	1/4	702733 0100	4,05
Torx T15	170	1/4	702733 0150	4,05
Torx T20	170	1/4	702733 0200	4,05
Torx T25	170	1/4	702733 0250	4,05
Torx Plus 6IP	170	1/4	702733 1060	4,05
Torx Plus 7IP	170	1/4	702733 1070	4,05
Torx Plus 8IP	170	1/4	702733 1080	4,05
Torx Plus 9IP	170	1/4	702733 1090	4,05
Torx Plus 10IP	170	1/4	702733 1100	4,05
Torx Plus 15IP	170	1/4	702733 1150	4,05
Torx Plus 20IP	170	1/4	702733 1200	4,05
Torx Plus 25IP	170	1/4	702733 1250	4,05

7109

Description	Length mm	Hexagonal support in	art.no.	€
Flat head 3.0 x 0.5 mm	170	1/4	702733 2030	4,05
Flat head 3.5 x 0.6 mm	170	1/4	702733 2035	4,05
Flat head 4.0 x 0.8 mm	170	1/4	702733 2040	4,05
Phillips PH0	170	1/4	702733 3000	4,05
Phillips PH1	170	1/4	702733 3010	4,05
Phillips PH2	170	1/4	702733 3020	4,05
Pozidriv PZ0	170	1/4	702733 4000	4,05
Pozidriv PZ1	170	1/4	702733 4010	4,05
Pozidriv PZ2	170	1/4	702733 4020	4,05
Hex, 2.0 AF	170	1/4	702733 5020	4,05
Hex, 2.5 AF	170	1/4	702733 5025	4,05
Hex, 3.0 AF	170	1/4	702733 5030	4,05
Hex, 4.0 AF	170	1/4	702733 5040	4,05

7109

Accessories

Description	art.no.	€
Adjustment key	**702734** 0001	2,70
Locking seal	702734 0002	3,20
Bit holder blade, 1/4" bit holding fixture	702734 0003	6,60

7109

Torque screwdriver set, 0.6 - 3.0 Nm

Contents	Torque N-m	art.no.	€
2 handles, bit holder blade bits in sizes PH1 and 2, PZ1 and 2 hex 2.5 and 3 mm TORX 10, 15, 20, 25 adjustment key certificate and user instructions shock-proof plastic box with soft foam inlay	0.6 - 1.5 and 1.5 - 3.0	**702736** 0630	102,–

7109

wiha TorqueFix® torque screwdriver

- Fixed torque value
- Tested to EN ISO 6789, BS EN 26789, ASME B107. 14M
- Tolerance ± 6 % (traceable to national standards)
- Click signal when the set torque value is reached
- Ergonomic multi-component handle, extremely handy due to the lightweight and compact design
- Handle size optimally adjusted to the torque range
- **Compatible replaceable blades: *Torque***
- Supplied in a plastic box with factory test certificate

Note:
- Torque recommendations refer to dry threaded connections. The torque values must be reduced for oily or greased threaded connections. The strength of the substrate material (containing the thread) must be at least equal to the strength of the screw.
- Screws, strength class 12.9

Ideal for correctly fitting indexable inserts

702630 0020

Torque N·m	Tolerance	Hexagonal support mm	Handle length mm	Handle width mm	art.no.	€
0.4	6%	4	112	23	**702630** 0004	81,–
0.5	6%	4	112	23	702630 0005	81,–
0.6	6%	4	112	23	702630 0006	81,–
0.8	6%	4	112	23	702630 0008	81,–
0.9	6%	4	112	23	702630 0009	81,–
1.1	6%	4	119	30	702630 0011	90,–
1.2	6%	4	119	30	702630 0012	90,–
1.5	6%	4	119	30	702630 0015	90,–

7110

Torque N·m	Tolerance	Hexagonal support mm	Handle length mm	Handle width mm	art.no.	€
2.0	6%	4	119	30	702630 0020	90,–
2.5	6%	4	119	30	702630 0025	90,–
3.0	6%	4	126	36	702630 0030	94,–
3.8	6%	4	126	36	702630 0038	94,–
5.0	6%	4	132	41	702630 0050	103,–
5.5	6%	4	132	41	702630 0055	103,–
6.0	6%	4	132	41	702630 0060	103,–
7.2	6%	4	132	41	702630 0072	103,–

7110

wiha TorqueVario®-S torque screwdriver

- With scale
- Infinitely variable torque settings with adjusting tool (included)
- Click signal when the set torque value is reached
- Ergonomic multi-component handle, extremely handy due to the lightweight and compact design
- Handle size optimally adjusted to the torque range
- Tested to EN ISO 6789, BS EN 26789, ASME B107. 14M
- Tolerance ± 6 % (traceable to national standards)
- **Compatible replaceable blades: *Torque***
- Supplied in a plastic box with factory test certificate

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With scale

Incl. adjustment tool

Individual sizes

Torque N·m	Tolerance	Hexagonal support mm	Handle length mm	Handle width mm	art.no.	€
0.4 - 1.0	6%	4	127	23	**702631** 0004	100,–
0.8 - 2.0	6%	4	131	30	702631 0008	111,–
1.0 - 5.0	6%	4	138	36	702631 0010	114,–
2.0 - 8.0	6%	4	142	41	702631 0020	122,–

7110

wiha iTorque torque screwdriver

- Digital scale, making torque easy to set
- Ergonomic plastic and metal composite handle made from high-quality and robust materials
- Handle size optimally adjusted to the torque range
- Clearly audible and tangible click signal when the set torque is reached
- Standards: EN ISO 6789, BS EN 26789, ASME B107.14M.
- Click Control - integrated counter records every use, calibration alert after every 5,000 uses (standard benchmark / resettable)
- Incl. torque bit universal holder, replaceable blade with holding fixture for C6.3 and E6.3 (1/4") bits
- Easy to switch between units - Nm in.lbs / Ncm in.oz
- **Compatible replaceable blades: *Torque***

Digital scale

Torque N·m	Hexagonal support mm	Handle length mm	art.no.	€
0.4 - 1.5	4	134	**702737** 0004	174,90
0.8 - 3.0	4	134	702737 0008	174,90
1.0 - 6.0	4	134	702737 0010	179,90

7110

wiha Torque replaceable blades

- Chrome vanadium steel, through-hardened with a matt chrome-plated finish
- Additional versions available on request
- Wiha ChromTop® Blade tip guarantees maximum dimensional stability
- **Compatible with *Wiha*** torque screwdrivers

Replaceable blades for hexagonal socket head screws, straight, colour code: red

Wr. width mm	max. torque N-m	Six-edged mm	Total length mm	Blade length mm	art.no.	€
1.3	0.4	4	175	42	**702645** 0013	4,70
1.5	0.9	4	175	42	702645 0015	4,70
2.0	1.8	4	175	42	702645 0020	4,70
2.5	3.8	4	175	42	702645 0025	4,70
3.0	5.5	4	175	42	702645 0030	4,70
4.0	8.0	4	175	42	702645 0040	4,70
					7110	

702645 0040

Replaceable blades for hexagonal socket head screws, ball head, colour code: red

Wr. width mm	max. torque N-m	Six-edged mm	Total length mm	Blade length mm	art.no.	€
1.5	0.4	4	175	42	**702646** 0015	4,80
2.0	0.9	4	175	42	702646 0020	4,80
2.5	2.0	4	175	42	702646 0025	4,80
3.0	3.8	4	175	42	702646 0030	4,80
4.0	8.0	4	175	42	702646 0040	4,80
					7110	

702646 0040

Replaceable blades for TORX screws, straight and *MagicSpring*®, colour code: dark green

TORX	max. torque N-m	Six-edged mm	Total length mm	Blade length mm	**Straight** art.no.	€	**MagicSpring** art.no.	€
T4	0.25	4	175	42	**702643** 0004	4,80		
T5	0.4	4	175	42	702643 0005	4,80		
T6	0.6	4	175	42	702643 0006	4,80	**702644** 0006	6,20
T7	0.9	4	175	42	702643 0007	4,80	702644 0007	6,20
T8	1.3	4	175	42	702643 0008	4,80	702644 0008	6,20
T9	2.5	4	175	42	702643 0009	4,80	702644 0009	6,20
T10	3.7	4	175	42	702643 0010	4,80	702644 0010	6,20
T15	5.5	4	175	42	702643 0015	4,80	702644 0015	6,20
T20	8.0	4	175	42	702643 0020	4,80	702644 0020	6,20
T25	8.0	4	175	42	702643 0025	4,80	702644 0025	6,20
					7110		7110	

702643 0020

702644 0020

Universal bit holder / adapter blade

Description	Six-edged mm	Total length mm	art.no.	€
Universal bit holder, C6.3 and E6.3 (1/4")	4	162	**702650** 0014	11,45
Adapter blade for 1/4" sockets	4	155	702650 1014	7,50
			7110	

702650 0014

702650 1014

STAHLWILLE TORSIOMETER 760 torque screwdriver

- With display
- For holding E6.3 1/4" bits
- Measuring element: flat torsion spring
- Clockwise tightening (with drag indicator) and anti-clockwise tightening
- Comparison scale (in-lb) and slider
- Incl. certificate

Bits on page 70-24

Tolerance ± 6 %

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Torque N-m	Scale division N-m	Length mm	art.no.	€
0.15-0.75	0.025	185	**702767** 0075	204,–
0.3-1.5	0.05	185	702767 0150	216,–
0.6-3.0	0.10	185	702767 0300	209,–
1.2-6.0	0.20	185	702767 0600	217,–
			7168	

wiha Torque wing-handle

- Ergonomic handle, extremely handy due to the compact design
- Especially for difficult-to-reach screws and tight spaces
- Click signal when the set torque is reached
- ± 6 %, traceable to national standards
- Opening torque approx. 30 % higher than tightening torque
- Supplied in a practical plastic box with factory test certificate
- Other items customisable and configurable on request
- EN ISO 6789, BS EN 26789, ASME B107.14M

TorqueFix®-Key torque wing handle driver

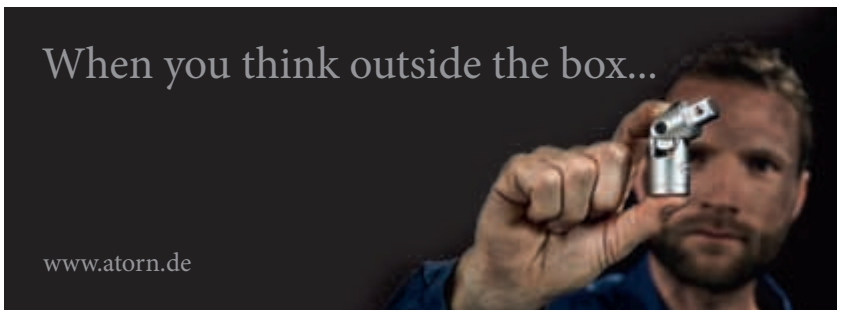
Torque N-m	Hexagonal support mm	Handle width mm	Handle length mm	art.no.	€
0.5	4	50	68	**702632** 0005	44,90
0.6	4	50	68	702632 0006	44,90
0.9	4	50	68	702632 0009	44,90
1.1	4	50	68	702632 0011	44,90
1.2	4	50	68	702632 0012	44,90
1.4	4	50	68	702632 0014	44,90
2.0	4	50	68	702632 0020	44,90
2.5	4	50	68	702632 0025	44,90
3.0	4	50	68	702632 0030	44,90
3.8	4	50	68	702632 0038	44,90
4.0	4	50	68	702632 0040	44,90
				7110	

Replaceable blades for hexagonal socket head screws, straight, colour code: red

Wr. width mm	Six-edged mm	Total length mm	Blade length mm	max. torque N-m	art.no.	€
1.5	4	75	20	0.9	**702664** 0015	3,20
2.0	4	75	20	1.8	702664 0020	3,20
2.5	4	75	20	3.8	702664 0025	3,20
3.0	4	75	20	5.5	702664 0030	3,20
4.0	4	75	20	8.0	702664 0040	3,20
					7110	

Replaceable blades for TORX screws, straight, colour code: dark green

TORX	Six-edged mm	Total length mm	Blade length mm	max. torque N-m	art.no.	€
T6	4.0	75	20	0.6	**702662** 0006	3,20
T7	4.0	75	20	0.9	702662 0007	3,20
T8	4.0	75	20	1.3	702662 0008	3,20
T9	4.0	75	20	2.5	702662 0009	3,20
T10	4.0	75	20	3.8	702662 0010	3,20
T15	4.0	75	20	5.5	702662 0015	3,20
T20	4.0	75	20	8.0	702662 0020	3,20
T25	4.0	75	20	8.0	702662 0025	3,20
					7110	



...new things are created.

ATORN®
High quality for great performance

wiha Tplus torque T-handle

Tolerance ± 6 %

TorqueVario®-STplus T-handle torque tool

- **Numerical scale for variable adjustment**
- With slip clutch
- Infinitely variable torque settings with adjusting tool (included)
- Comfortable T-handle with soft zones for optimum torque transmission
- Click signal when the set torque is reached
- Supplied in a practical plastic box with factory test certificate
- **Compatible replaceable blades: Tplus**

Torque N·m	Tolerance	Six-edged mm	Handle length mm	Handle width mm	art.no.	€
5-14	6%	6	56	120	**702656** 0004	164,90
					7110	

wiha Torque TR torque pistol-grip handle

Tolerance ± 6 %

TorqueVario®-S TR torque screwdriver

- Ergonomic pistol grip for high torque
- Axial force transmission with no breakdown torque
- Hard and soft zones adapted to fit the hand for max. application of force
- Fine-toothed ratchet with 72 teeth allows a 5° start angle: works precisely even when space is tight
- Low range of movement for fast operation, e.g. with 2-finger grip
- Torque can be set easily via the adjusting tool integrated in the handle
- Click signal when the set torque is reached
- Non-magnetic blade locking mechanism
- ± 6 %, traceable to national standards
- Opening torque approx. 30 % higher than tightening torque
- Supplied in a practical plastic box with factory test certificate
- EN ISO 6789, BS EN 26789, ASME B107.14M
- **Compatible replaceable blades: Tplus**

Torque N·m	Tolerance	Hexagonal support mm	Handle length mm	Handle width mm	art.no.	€
2.0-8.0	6%	6	110	125	**702633** 0003	129,90
					7110	

wiha Tplus replaceable blades

- Made from high-quality chrome vanadium steel, through-hardened with a matt chrome-plated finish
- **Wiha ChromTop®** blade tip guarantees maximum dimensional stability
- Compatible with **Wiha** pistol-grip and T-handle torque tools

Replaceable blades for hexagonal socket head screws, straight, colour code: red

Wr. width mm	Six-edged mm	Total length mm	Blade length mm	max. torque N·m	art.no.	€
3.0	6	130	53	5.5	**702672** 0030	6,90
4.0	6	130	53	15.0	702672 0040	6,90
5.0	6	130	53	15.0	702672 0050	6,90
6.0	6	130	53	15.0	702672 0060	6,90
					7110	

Replaceable blades for TORX screws, straight, colour code: dark green

TORX	Six-edged mm	Total length mm	Blade length mm	max. torque N·m	art.no.	€
T15	6	130	53	5.5	**702670** 0015	7,–
T20	6	130	53	10.0	702670 0020	7,–
T25	6	130	53	15.0	702670 0025	7,–
T27	6	130	53	15.0	702670 0027	7,–
T30	6	130	53	15.0	702670 0030	7,–
T40	6	130	53	15.0	702670 0040	7,–
					7110	

Adapter

Description mm	Six-edged mm	Total length mm	art.no.	€
1/4" bit quick-release holder for T-handle	6	125	**702673** 2001	20,90
T-handle adapter blade for 1/4" sockets	6	120	702673 4001	11,90
T-handle adapter blade for 3/8" sockets	6	120	702673 4002	11,90
			7110	

702673 2001

702673 4001

ATORN® Torque wrench

Tolerance ± 4 %

- Haptic and acoustic adjustment aid
- User-friendly thanks to an ergonomically shaped handle with a structured comfort-grip surface
- Clearly audible and tangible short-path release when the set torque is reached
- Quickly secured and released via locking ring
- Dual scale with N·m and lbf·ft.
- Viewing window protects the scale against damage
- High-quality permanent laser marking
- Shipped in protective tube packaging incl. a hanging fixture
- Made in Germany

Lever-reversible ratchet

- Accuracy ± 3 % of scale value, ± 4 % with 1 - 6 Nm torque wrench
- ½" ratchet with 32 teeth, 3/8" ratchet with 30 teeth, ¼" ratchet with 20 teeth
- DIN EN ISO 6789:2003 (D) square in accordance with DIN 3120, ISO 1174-1

Torque N·m	Drive	Scale division N·m	Length mm	art.no.	€	Calibration art.no.	Calibration €
1-6	1/4"	0.1	234	**702602** 0001	176,–	079310 0001	31,50
2.5-25	1/4"	0.25	274	702602 0002	170,–	079310 0001	31,50
10-60	3/8"	0.5	355	702602 0003	176,–	079310 0001	31,50
20-120	1/2"	1.0	456	702602 0004	164,–	079310 0001	31,50
40-200	1/2"	1.0	551	702602 0005	176,–	079310 0001	31,50
60-320	1/2"	2.0	621	702602 0006	199,–	079310 0001	31,50

7109

Snap-in tools start on page 70-41

For snap-in tools

- Accuracy ± 3 % of scale value
- Incl. serial number and certificate
- DIN EN ISO 6789:2003 (D)

Torque N·m	Quadratic mm	Scale division N·m	Length mm	art.no.	€	Calibration art.no.	Calibration €
2.5-25	9 x 12	0.25	258	**702603** 0001	124,–	079310 0001	31,50
10-60	9 x 12	0.5	312	702603 0002	126,–	079310 0001	31,50
20-120	14 x 18	1.0	393	702603 0003	130,–	079310 0001	31,50
40-200	14 x 18	1.0	488	702603 0004	146,–	079310 0001	31,50
60-230	14 x 18	2.0	558	702603 0005	170,–	079310 0001	31,50

7109

STAHLWILLE® MANOSKOP® 755 user-adjusted torque wrench

Tolerance ± 4 %

- Releasing
- Holding fixture for interchangeable snap-in tools
- Double stop signal
- Exceptionally light and handy
- Handle and shank made from square tubular steel
- Continued application of force once the wrench has released, or the application of force in the opposite direction (up to the max. measurement limit for the torque wrench) will not affect the release mechanism, which protects it against damage.
- Interchangeable snap-in tools for anti-clockwise tightening
- **Adjusted using a torque wrench testing instrument**
- **Available with pre-set release value (10 % supplement)**

For snap-in tools

Torque N·m	Design	Quadratic mm	Length mm	Weight kg	art.no.	€	Calibration art.no.	Calibration €
4-40	N·m / ft·lb	9 x 12	201	0.522	**702757** 0040	106,–	079310 0001	31,50
20-100	N·m / ft·lb	9 x 12	318	0.635	702757 0100	115,–	079310 0001	31,50
30-200	N·m / ft·lb	14 x 18	457	1.060	702757 0200	112,–	079310 0001	31,50
60-300	N·m / ft·lb	14 x 18	609	1.210	702757 0300	124,–	079310 0001	31,50

7168

STAHLWILLE® MANOSKOP® 730 torque wrench

- Releasing
- Tolerance ± 4 %
- Easy-to-read N·m / ft·lb dual scale, or N·m / in·lb from 6 - 50 N·m size
- Extremely resistant to mechanical wear and protected against dirt inside the wrench
- **No need for resetting to 0 as a load is only applied to the measuring element during the tightening process - bending beam instead of a spring**
- Double stop signal
- QuickRelease safety lock from size 6 - 50 Nm to 130 - 650 Nm ensures that snap-in tools are securely engaged and quick to change
- **Set the release torque in a flash - the fastest a torque wrench can be adjusted**
- Low-wear drive
- Continued application of force once the wrench has released, or the application of force in the opposite direction (e.g. with stuck screws) will not affect the release mechanism, which protects it against damage
- Quick external adjustment without dismantling the torque wrench
- Incl. certificate

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Extremely quick to set

730/2 torque wrench for snap-in tools

Torque N·m	Scale division N·m	Quadratic mm	Length mm	Weight kg	art.no.	€	Calibration art.no.	Calibration €
4-20	0.5	9 x 12	178.5	0.315	**702750** 0020	183,–	079310 0001	31,50
8-40	1.0	9 x 12	222	0.395	702750 0040	187,–	079310 0001	31,50

7168

730/5 torque wrench for snap-in tools

Torque N·m	Scale division N·m	Design	Quadratic mm	Length mm	Weight kg	art.no.	€	Calibration art.no.	Calibration €
6-50	2	N·m / ft·lb	9 x 12	315	0.805	**702751** 0050	197,–	079310 0001	31,50
20-100	2.5	N·m / ft·lb	9 x 12	370	0.965	702751 0100	209,–	079310 0001	31,50
25-130	2.5	N·m / ft·lb	14 x 18	410	1.1	702751 0130	219,–	079310 0001	31,50
40-200	5	N·m / ft·lb	14 x 18	455	1.25	702751 0200	237,–	079310 0001	31,50
80-400	10	N·m / ft·lb	14 x 18	590	1.88	702751 0400	347,–	079310 0001	31,50
130-650	20	N·m / ft·lb	14 x 18	875	3.28	702751 0650	516,–	079310 0002	42,–

7168

With integral ratchet

Torque N·m	Scale division N·m	Design	Drive	Length mm	Weight kg	art.no.	€	Calibration art.no.	Calibration €
6-50	2	N·m / ft·lb	3/8″	352	0.9	**702754** 0050	239,–	079310 0001	31,50
30-150	5	N·m / ft·lb	1/2″	452	1.395	702754 0150	244,–	079310 0001	31,50
40-200	5	N·m / ft·lb	1/2″	483	1.49	702754 0200	264,–	079310 0001	31,50
60-300	10	N·m / ft·lb	1/2″	553	1.72	702754 0300	299,–	079310 0001	31,50

7168

With integral QuickRelease ratchet

Torque N·m	Scale division N·m	Design	Drive	Length mm	Weight kg	art.no.	€	Calibration art.no.	Calibration €
40-200	5	N·m / ft·lb	1/2″	483	1.49	**702754** 1200	268,–	079310 0001	31,50

7168

STAHLWILLE® SENSOTORK® 713 torsion angle torque wrench

- With display, for clockwise and anti-clockwise tightening
- Flexible and easy to operate thanks to a large display with menu prompts
- Particularly large measurement range (5 % to 100 % of nominal value)
- Supplied with reversible ratchet, QuickRelease safety lock
- Measurement not dependent on the force application point
- Units of measurement: N·m, ft·lb, in·lb
- Optical, haptic and acoustic signal warning time can be adjusted
- Torque and torsion angle are simultaneously visible
- Convenient and extremely large-range torsion angle measurement without a reference arm
- Allows individual snap-in tool lengths to be set
- Maintenance-friendly thanks to easy adjustment and automatic notification of the next calibration date
- Recurring screw joints can be compiled into a menu-driven sequence
- Password protection to prevent accidental adjustment or unauthorised use
- Meets DKD-R 3-7, Class 2 - certificate included
- Torsion angle display accuracy ± 1°, display accuracy ± 1 %

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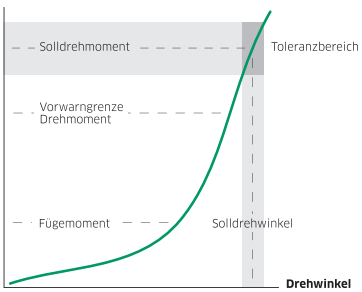

With torsion angle function

Torque N·m	Quadratic mm	Drive	Length mm	Weight kg	art.no.	€
3-60	9 x 12	3/8″	378	0.856	**702760** 0060	1.119,–
10-200	14 x 18	1/2″	608	1.552	702760 0200	1.189,–
20-400	14 x 18	3/4″	838	2.332	702760 0400	1.299,–

7168

STAHLWILLE® MANOSKOP® 730N torque wrench

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QuickSelect rapid adjustment mechanism

- Releasing
- Tolerance ± 3 %
- Very easy-to-read dual scale with different colours for N·m and ft·lb
- Extremely resistant to mechanical wear and protected against dirt inside the wrench
- **No need for resetting to 0 as a load is only applied to the measuring element during the tightening process - bending beam instead of a spring**
- Perceptible double stop signal when the set value is reached
- QuickRelease safety lock ensures that snap-in tools are securely engaged and quick to change
- **QuickSelect rapid adjustment mechanism - simply PULL, SET and SECURE the adjusting knob**
- Scale ring with fine adjustment for the measurement range marked in black on the dual scale
- Low-wear drive
- 2-comoponent handle made from extremely rugged plastic and a comfort-grip soft zone - resistant to oils, grease, fuel, brake fluid and Skydrol
- Continued application of force once the wrench has released, or the application of force in the opposite direction (e.g. with stuck screws) will not affect the release mechanism, which protects it against damage
- Quick external adjustment without dismantling the torque wrench
- Incl. certificate

Bending beam instead of spring

QuickRelease safety lock

Scale ring with fine adjustment

For snap-in tools

Torque N·m	Scale division N·m	Design	Quadratic mm	Length mm	Weight kg	art.no.	€	Calibration art.no.	Calibration €
2-20	1 (0.2)	N·m / in·lb	9 x 12	275	0.737	**702747** 0020	209,90	079310 0001	31,50
10-50	5 (0.25)	N·m / ft·lb	9 x 12	330	0.831	702747 0050	219,90	079310 0001	31,50
20-100	10 (0.5)	N·m / ft·lb	9 x 12	386	0.988	702747 0100	239,90	079310 0001	31,50
25-130	10 (0.5)	N·m / ft·lb	14 x 18	421	1.128	702747 0130	249,90	079310 0001	31,50
40-200	10 (1)	N·m / ft·lb	14 x 18	467	1.264	702747 0200	272,50	079310 0001	31,50
80-400	20 (2)	N·m / ft·lb	14 x 18	607	1.655	702747 0400	399,90	079310 0001	31,50
130-650	50 (2.5)	N·m / ft·lb	14 x 18	890	3.231	702747 0650	594,50	079310 0002	42,–

7168

With integral QuickRelease ratchet

- In a sturdy plastic case

Torque N·m	Scale division N·m	Design	Drive	Length mm	Weight kg	art.no.	€	Calibration art.no.	Calibration €
10-50	5 (0.25)	N·m / ft·lb	3/8″	372	1.386	**702749** 0050	338,–	079310 0001	31,50
20-100	10 (0.5)	N·m / ft·lb	1/2″	428	1.554	702749 0100	349,–	079310 0001	31,50
40-200	10 (1)	N·m / ft·lb	1/2″	526	2.014	702749 0200	391,–	079310 0001	31,50

7168

Safety in the workplace

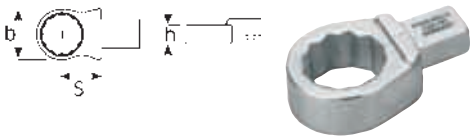
Please protect your eyes, ears and respiratory system!

Snap-in tools, 9 x 12 mm

Open-end snap-in tool

Wr. width mm	b mm	h mm	S mm	art.no.	€
7	22	5	17.5	**702780** 0007	*28,90*
8	22	5	17.5	702780 0008	26,30
9	26	5.5	17.5	702780 0009	*28,90*
10	26	5.5	17.5	702780 0010	24,90
11	26	5.5	17.5	702780 0011	25,50
12	30	7	17.5	702780 0012	*26,70*
13	30	7	17.5	702780 0013	24,90
14	35	8	17.5	702780 0014	24,90
15	35	8	17.5	702780 0015	25,90
16	38	8.5	17.5	702780 0016	24,90
17	38	8.5	17.5	702780 0017	24,90
18	42	9	20	702780 0018	25,90
19	42	9	20	702780 0019	24,90

7168

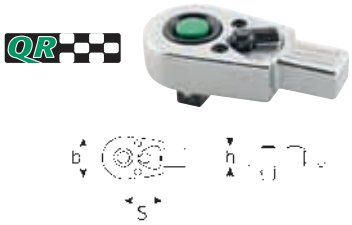


Snap-in ring tool

Wr. width mm	b mm	h mm	S mm	art.no.	€
7	13	8	17.5	**702786** 0007	*27,90*
8	14.2	8	17.5	702786 0008	27,10
10	17.2	9	17.5	702786 0010	27,20
11	18.5	9	17.5	702786 0011	*27,90*
12	20.5	11	17.5	702786 0012	*27,90*
13	21.5	11	17.5	702786 0013	27,20
14	22.5	11	17.5	702786 0014	27,90
15	24.5	12	17.5	702786 0015	27,10
16	26	12	17.5	702786 0016	27,20
17	27	13	17.5	702786 0017	27,20
18	28	13	17.5	702786 0018	27,20
19	30.5	13	17.5	702786 0019	27,20
21	33	15	17.5	702786 0021	*28,50*
22	34.5	15	17.5	702786 0022	27,20

7168

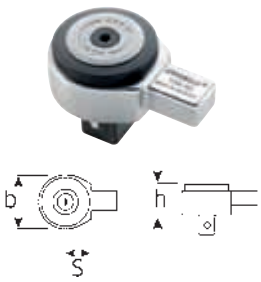
QuickRelease snap-in ratchet



Drive	b mm	h mm	S mm	**9 x 12mm** art.no.	€
1/4"	22	13.8	17.5	**702768** 0001	71,80
3/8"	29	18	28	702768 0002	73,60
1/2"	29	18	28	702768 0003	75,30

7168

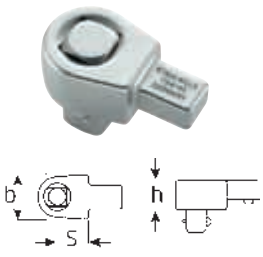
Fine-toothed snap-in ratchet, reversible, 60 teeth



Drive	b mm	h mm	S mm	**9 x 12mm** art.no.	€
3/8"	33	24	17.5	**702772** 0001	60,50
1/2"	33	24	17.5	702772 0002	62,30

7168

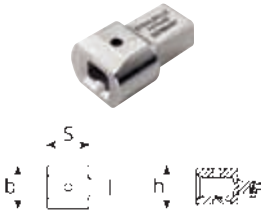
Square snap-in tool



Drive	b mm	h mm	S mm	art.no.	€
1/4"	20	14	17.5	**702775** 0001	24,60
3/8"	20	14	17.5	702775 0002	24,60
1/2"	20	14	17.5	702775 0003	25,20

7168

QuickRelease snap-in adapter



Description	b mm	h mm	S mm	art.no.	€
9 x 12 mm to 14 x 18 mm	31	26	30.5	**702801** 0001	*42,90*

7168

STAHLWILLE Snap-in tools, 14 x 18 mm

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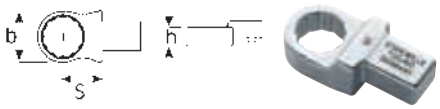
Open-end snap-in tool

Wr. width mm	b mm	h mm	S mm	art.no.	€
13	30	7	25	**702782** 0013	28,90
14	35	8	25	702782 0014	29,90
15	35	8	25	702782 0015	32,30
16	38	9	25	702782 0016	29,90
17	38	9	25	702782 0017	28,50
18	42	10	25	702782 0018	29,90
19	42	10	25	702782 0019	28,60
21	50	11	25	702782 0021	35,30
22	50	11	25	702782 0022	34,70
24	53	12	25	702782 0024	34,70
25	53	12	25	702782 0025	38,90
27	60	13	30	702782 0027	34,70
30	66	14	30	702782 0030	38,80
32	66	14	32.5	702782 0032	38,80
34	66	14	32.5	702782 0034	43,40
36	74	15	32.5	702782 0036	41,20
38	74	15	32.5	702782 0038	43,90
41	82	15	36.5	702782 0041	43,30

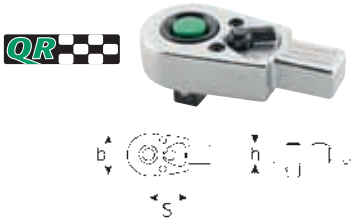
7168



Snap-in ring tool

Wr. width mm	b mm	h mm	S mm	art.no.	€
13	22.5	11	25	**702788** 0013	29,50
14	23	11	25	702788 0014	29,50
15	24	11	25	702788 0015	30,10
16	25.5	12	25	702788 0016	29,50
17	27	12	25	702788 0017	29,50
18	29	13	25	702788 0018	29,50
19	30.5	13	25	702788 0019	29,50
21	33	15	25	702788 0021	34,90
22	34.5	15	25	702788 0022	34,90
24	37.5	15	25	702788 0024	34,90
27	42.5	17	25	702788 0027	34,90
28	45.5	19	25	702788 0028	42,70
30	46	19	25	702788 0030	39,60
32	47.5	19	25	702788 0032	39,60
34	52	19	28	702788 0034	42,70
36	54	19	28	702788 0036	41,60
41	60	20	30	702788 0041	41,60

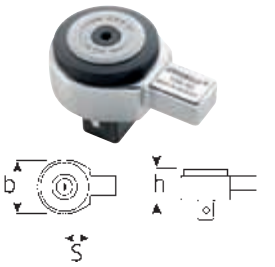
7168



QuickRelease snap-in ratchet

Drive	b mm	h mm	S mm	art.no.	€
1/2"	41	22.3	38.5	**702768** 0004	80,10

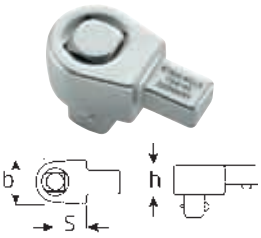
7168



Fine-toothed snap-in ratchet

Drive	b mm	h mm	S mm	art.no.	€
1/2"	43	26	25	**702772** 0003	64,40
3/4"	50	31.5	25	702772 0004	95,70

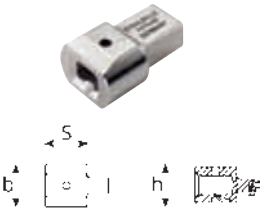
7168



Square snap-in tool

Drive	b mm	h mm	S mm	art.no.	€
1/2"	27	18	25	**702775** 0004	27,30
3/4"	40	25	25	702775 0005	44,90

7168



QuickRelease snap-in adapter

Description	b mm	h mm	S mm	art.no.	€
Adapter, 14 x 18 mm to 9 x 12 mm	28	21	21.5	**702801** 0002	68,30

7168

Gripping tweezers

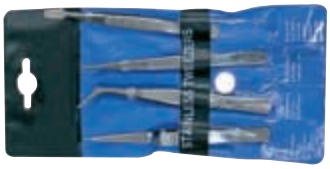
- **Made from stainless steel**

711016 0001

711016 0002

711016 0003

711016 0004



Individual

Design	Length mm	art.no.	€
Pointed tweezers	115	**711016** 0001	8,55
Reverse-action tweezers	120	711016 0002	8,55
Flat-tip tweezers	110	711016 0003	8,55
Pointed tweezers, bent	120	711016 0004	8,55

7112

Set

Description	art.no.	€
Set of 4 tweezers in a plastic pouch	**711017** 0040	34,15

7112

ATORN® Knife

Description	art.no.	€
1 blade, fixed, wooden handle	**711001** 0108	2,55
1 blade with wire scraper, foldable, plastic handle	711001 0109	3,90
1 blade with wire scraper, foldable, wooden handle	711001 0110	4,05
2 blades (small blade with wire scraper) plus marking tool and screwdriver, foldable, plastic handle	711001 0111	7,50

7129

Description	art.no.	€
1 blade plus marking tool, foldable, wooden handle	711001 0113	5,75
1 blade plus marking tool and screwdriver, foldable, plastic handle	711001 0114	6,40
Stainless steel blade with serrated edge, non-slip, blade locking button	711001 0115	10,95
Stainless steel blade with 2 notches, non-slip, locking blade	711001 0116	11,95

7129

JOKARI® Cable knife

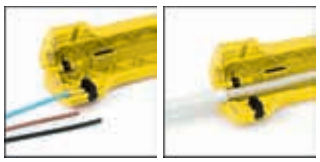
- For slitting and stripping

for cable Ø mm	art.no.	€
8 - 28	**711010** 0828	18,15

7129

JOKARI® Stripper

- For stripping NYM cables with Ø 8 - 13 mm, as well as 1.5 + 2.5 mm²
- For right-handed and left-handed users
- Stranded wire stripping length always 11 mm



L mm	Ø mm	art.no.	€
130	40	**710555** 0013	20,95

7129

ATORN® Utility knife

- Extremely robust and smooth
- Ergonomically shaped full metal casing with stainless steel blade guide

Description	art.no.	€
Utility knife, auto-lock mechanism, 9 mm blade	**711032** 0009	8,25
Utility knife, locking cog, 18 mm blade	711032 0018	12,75
	7129	

Utility knife

- Metal blade guide
- Locking button

711025 0009

711025 0018

Description			10 spare blades	
	art.no.	€	art.no.	€
Utility knife, 9 mm, incl. 1 blade	**711025** 0009	4,65	**711026** 0009	3,65
Utility knife, 18 mm, incl. 3 blades	711025 0018	7,75	711026 0018	3,70
	7129		7129	

STANLEY® Knives and utility knives

Interlock™ quick-release professional knife

- Bi-material handle ensures safe non-slip work
- Patented Interlock™ connection secures the fixed blade by overlapping the two halves of the handle
- Integrated extra line cutter; only functions when blade is fully retracted
- Up to eight blades can be stored in the handle
- Supplied with three spare blades

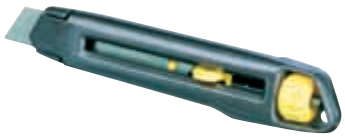
Description	art.no.	€
Quick-release professional knife, length 180 mm	**711027** 0001	16,40
	7129	

Spare blades

Description		art.no.	€
5 spare blades for 711027 001, 711029 001	5	**711028** 0001	2,10
		7129	

Interlock™ utility knife

- Metal body (die-cast), high stability and low weight
- Patented Interlock™ connection secures the fixed blade by overlapping the two halves of the handle
- Blade slider locks securely into place



Description		art.no.	€
Interlock™ utility knife, length 165 mm	5	**711030** 0001	9,35
		7129	

Spare blades

Description		art.no.	€
10 spare blades for 711030 001	5	**711031** 0001	4,90
		7129	

ATORN® Scissors

- Work scissors, polished cutting edges, painted handles
- Paper scissors, nickel-plated

711020 0001

711020 0002

711020 0003

Description	L mm	art.no.	€
Work scissors	200	**711020** 0001	7,35
Work scissors	250	711020 0002	8,55
Paper scissors	250	711020 0003	7,05
		7129	

TORNUS All-purpose shears

- Straight cutting edge, stainless steel
- With 2-component handle
- Ideal for thin sheet metal, plastics, leather, paper etc.

L mm	art.no.	€
140	**711021** 0140	13,50
190	711021 0190	14,50
	7129	

Snips

Hand snips

- Berlin-type, made from die-forged special steel
- Induction-hardened cutting edges, suitable for stainless steel

Total length mm	art.no.	€
250	**712005** 0250	14,30
300	712005 0300	17,45
	7132	

Straight cutting snips

- Hardened die-forged cutting edges
- For straight cuts

712010 0001

712010 0002

Design	Total length mm	art.no.	€
Right-hand cut	245	**712010** 0001	24,50
Left-hand cut	245	712010 0002	24,50
		7132	

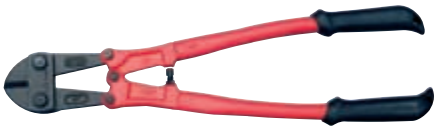
Circular cutting snips

- For curved cuts, short and long cuts
- For sheet metal up to 1.8 mm
- Forged steel cutting head
- Handle with PVC coating

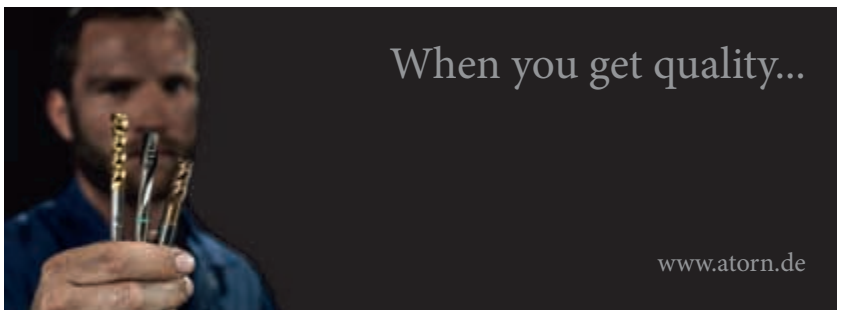
Design	Total length mm	art.no.	€
Right-hand	230	**712015** 0001	34,50
Left-hand	230	712015 0002	34,50
		7132	

Bolt cutter

- Specially constructed for hard steel up to 162 kp/mm²
- Tensile strength 1,620 N/mm²



Total length mm	Bolt cutter art.no.	€	Spare heads art.no.	€
490	**712020** 0470	41,70	**712025** 0470	19,40
640	712020 0630	53,85	712025 0630	26,95
940	712020 0900	106,20	712025 0900	35,10
	7132		7132	



...then it's ATORN.

ATORN®
High quality for great performance

DIN ISO 5745 | DIN ISO 5749 | DIN ISO 5746 | DIN ISO 5748 | DIN ISO 8976

- Chrome vanadium steel
- Handle PVC-coated, joint polished or with 2-component (2K) covering, high-gloss polished, chrome-plated

Flat-nose pliers with short jaws

- DIN ISO 5745

Total length mm	PVC dipped handle art.no.	€	2K handle art.no.	€
140	**710498** 0140	*8,60*		
160	710498 0160	9,–	**710499** 0160	11,40
	7130		7130	

Flat-nose pliers with long jaws

- DIN ISO 5745

Total length mm	PVC dipped handle art.no.	€	2K handle art.no.	€
140	**710501** 0140	10,40		
160	710501 0160	11,–	**710505** 0160	13,80
	7130		7130	

Radio or telephone pliers (needle-nose pliers) with cutting edge

- DIN ISO 5745

Total length mm	PVC dipped handle art.no.	€	2K handle art.no.	€
140	**710520** 0140	10,40		
160	710520 0170	10,80	**710525** 0170	15,–
200	710520 0200	13,60	710525 0200	17,40
	7130		7130	

Radio or telephone pliers (needle-nose pliers) with long handles

- DIN ISO 5745

Total length mm	PVC dipped handle art.no.	€
280	**710526** 0280	17,–
	7130	

Radio or telephone pliers (needle-nose pliers) with cutting edge

- DIN ISO 5749
- 45° angled tip

Total length mm	PVC dipped handle art.no.	€	2K handle art.no.	€
200	**710530** 0200	16,–	**710535** 0200	19,80
	7130		7130	

Radio or telephone pliers (needle-nose pliers) with long handles

- DIN ISO 5745
- 45° angled tip

Total length mm	PVC dipped handle art.no.	€
280	**710536** 0280	19,–
	7130	

Diagonal cutting pliers

- DIN ISO 5749

Total length mm	Design	PVC dipped handle art.no.	€	2K handle art.no.	€
145	Hardened cutting edges for hardened steel wire (piano wire)	**710145** 0145	10,80		
160	Special steel for hardened steel wire (piano wire)	710145 0161	11,–	**710150** 0161	15,60
		7130		7130	

Heavy-duty diagonal cutting pliers

- DIN ISO 5749
- Special steel for hardened steel wire (piano wire)

Total length mm	PVC dipped handle art.no.	€	2K handle art.no.	€
160	**710155** 0160	13,40	**710160** 0160	19,60
180	710155 0180	14,40	710160 0180	21,60
200	710155 0200	*16,40*	710160 0200	22,40
	7130		7130	

Combination pliers

- DIN ISO 5746

Total length mm	Design	PVC dipped handle art.no.	€	2K handle art.no.	€
160	Bevelled	**710135** 0165	8,60	**710140** 0165	12,20
180	Bevelled	710135 0180	9,20	710140 0180	13,40
200	Bevelled	710135 0200	10,80	710140 0200	15,40
		7130		7130	

Heavy-duty end cutting pliers

- DINISO 5748
- Made from special steel, for hardened steel wire (piano wire)

Total length mm	PVC dipped handle art.no.	€	2K handle art.no.	€
160	**710185** 0155	17,40	**710190** 0155	*20,–*
200	710185 0200	19,40	710190 0200	24,40
	7130		7130	

Three-way pliers

- Flat-nose pliers
- Wire-stripping pliers
- Crimping pliers

Total length mm	2K handle art.no.	€
160	**710134** 0160	16,20
	7130	

GRIPSTAR water pump pliers

- DIN/ISO 8976
- One-handed operation, with box joint, 10 fine adjustment settings
- Chrome vanadium

Total length mm	PVC dipped handle art.no.	€	2K handle art.no.	€
250	**710131** 0250	20,40	**710132** 0250	24,20
	7130		7130	

Water pump pliers, chrome vanadium

- DIN/ISO 8976
- With integrated groove joint and pinch guard
- Chrome vanadium

Total length mm	2K handle art.no.	€
250	**710130** 0245	18,95
	7130	

Pliers set

- 4 pieces in a plastic case

Contents	art.no.	€
Combination pliers, 180 mm, 2K handle (710140 0180); radio or telephone pliers, 160 mm, 2K handle (710525 0170); diagonal cutting pliers, 160 mm, 2K handle (710150 0161); GRIPSTAR water pump pliers, 250 mm, PVC dipped handle (710131 0250)	**710551** 0004	77,–
	7130	

ATORN® Water pump pliers

DIN ISO 8976

- Chrome vanadium steel
- With slip box joint and safety pinch guard
- Self-clamping on the workpiece, saving effort and providing a non-slip grip

Total length mm	Standard art.no.	€
175	**710110** 0180	11,05
240	710110 0240	11,55
300	710110 0300	17,45
	7130	

ATORN® VDE pliers

DIN ISO 5745 | DIN ISO 5749 | DIN ISO 5746

- **Specially tailored to the strict safety guidelines of IEC 900, DIN EN 60900 and VDE 0680/Part 2**
- Chrome vanadium steel
- High-gloss polished, chrome-plated
- Directly sprayed 1,000 V insulating handles

VDE flat-nose pliers with long jaws

- DIN ISO 5745

Total length mm	Insulated handle art.no.	€
160	**711036** 0160	16,80

7130

VDE round-nose pliers with long jaws

- DIN ISO 5745

Total length mm	Insulated handle art.no.	€
160	**711038** 0160	16,80

7130

VDE radio or telephone pliers (needle-nose pliers)

- DIN ISO 5745
- With cutting edge

Total length mm	Insulated handle art.no.	€
160	**711050** 0170	16,40
200	711050 0200	19,80

7130

VDE radio or telephone pliers (needle-nose pliers)

- DIN ISO 5745
- With cutting edge
- 45° angled tip

Total length mm	Insulated handle art.no.	€
200	**711055** 0200	22,40

7130

VDE diagonal cutting pliers

- DIN ISO 5749

Total length mm	Insulated handle art.no.	€
140	**711045** 0140	16,80
160	711045 0160	17,80

7130

VDE heavy-duty diagonal cutting pliers, made from special steel

- DIN ISO 5749

Total length mm	Insulated handle art.no.	€
200	**711039** 0200	24,80

7130

VDE combination pliers

- DIN ISO 5746

Total length mm	Insulated handle art.no.	€
160	**711040** 0160	15,–
180	711040 0180	16,–
200	711040 0200	17,80

7130

VDE wire-stripping pliers

- With grub screw and opening spring, for cables and stranded wires up to Ø 5 mm

Total length mm	Insulated handle art.no.	€
160	**711060** 0160	18,–

7130

VDE pliers set in a plastic case

- 4 pieces

Contents	art.no.	€
VDE combination pliers, 180 mm (711040 0180); VDE radio or telephone pliers, 200 mm (711050 0200); VDE diagonal cutting pliers, 160 mm (711045 0160); VDE wire-stripping pliers, 160 mm (711060 0160)	**711061** 0004	76,–

7130

DIN ISO 5746 | DIN ISO 5745 | DIN ISO 5749 | DIN ISO 8976

Combination pliers
- DIN ISO 5746
- Cutting edges for hard and soft wire, long cutting edges for thicker cables
- Oil-hardened special tool steel, polished head, cutting edges induction-hardened to approx. 60 HRc

Total length mm	2K handle art.no.	€
160	**710601** 0160	12,30
180	710601 0180	12,50
200	710601 0200	14,35
	7131	

Wire-stripping pliers
- Grub screw for adjusting to the desired wire or stranded wire Ø
- Special tool steel, oil-hardened with polished head

Total length mm	Design	2K handle art.no.	€
160	With opening spring; for stranded wires up to max. 5 mm in diameter or 10 mm²	**710602** 0160	16,10
		7131	

Electrician's pliers
- For gripping and bending wires
- Precision wire-stripping holes and cutting edges
- Oil-hardened special tool steel, polished head, cutting edges induction-hardened to approx. 60 HRc

Total length mm	Handle	Crimping of wire-end sleeves mm²	2K handle art.no.	€
160	2K handle	0.5-0.75/1.5/2.5	**710603** 0160	25,–
			7131	

Needle-nose pliers with cutting edge (stork beak pliers)
- DIN ISO 5745
- High-strength, resilient precision tips, toothed jaws
- Oil-hardened vanadium steel, polished head, cutting edges induction-hardened to approx. 61 HRc

710604 0200

710605 0200

Total length mm	Design	2K handle art.no.	€
200	Straight jaws	**710604** 0200	17,80
200	40° angled jaws	710605 0200	19,70
		7131	

Diagonal cutting pliers
- DIN ISO 5749
- For hard and soft wires
- Vanadium electrical steel, polished head, cutting edges induction-hardened to approx. 62 HRc

Total length mm	2K handle art.no.	€
140	**710606** 0140	15,05
160	710606 0160	15,45
180	710606 0180	16,55
	7131	

CoBolt compact bolt cutter
- Particularly high cutting capacity with low force application
- Oil-hardened chrome vanadium electrical steel, cutting edges induction-hardened to approx. 64 HRc

Total length mm	Plastic dipped handle art.no.	€	2K handle art.no.	€
200	**710610** 0200	27,20	**710611** 0200	29,15
	7131		7131	

Heavy-duty diagonal cutting pliers
- DIN ISO 5749
- Forged joint axle to withstand maximum strain
- High cutting capacity with low force application
- Oil-hardened chrome vanadium electrical steel, cutting edges induction-hardened to approx. 64 HRc

Total length mm	2K handle art.no.	€
140	**710612** 0140	18,40
160	710612 0160	18,90
180	710612 0180	20,85
200	710612 0200	22,25
250	710612 0250	26,60
	7131	

Pliers wrench, patented

- Pliers and a wrench combined in one tool
- Parallel smooth gripper jaws, box joint
- Quick adjustments at the push of a button, 10:1 force transmission

Total length mm	Wr. width mm	Plastic dipped handle art.no.	€	2K handle art.no.	€
150	27	**710620** 0150	36,30	**710621** 0150	39,10
180	35	710620 0180	38,–	710621 0180	40,30
250	46	710620 0250	43,60	710621 0250	46,65
300	60	710620 0300	51,60		
		7131		7131	

Cobra water pump pliers, patented

- DIN ISO 8976
- Box joint, quick to adjust at the push of a button, one-handed adjustment, pinch guard
- Oil-hardened chrome vanadium electrical steel, jaws with special hardened teeth, approx. 63 HRc

Total length mm	for pipe Ø in	for nut wr. width mm	Plastic dipped handle art.no.	€
180	1 1/2"	36	**710623** 0180	18,45
125	1"	27	710623 0125	17,25
150	1 1/4"	30	710623 0150	17,50
250	2"	46	710623 0250	19,65
300	2 3/4"	60	710623 0300	27,–
400	3 1/2"	95	710623 0400	47,–
560	4 1/2"	120	710623 0560	78,25
			7131	

Pliers set

- 3 pieces

Contents	art.no.	€
Combination pliers, 180 mm, 2K handle (710601 0180); needle-nose pliers, 200 mm, 2K handle (710604 0200); diagonal cutting pliers, 160 mm, 2K handle (710606 0160)	**710600** 2011	45,75
	7131	

KNIPEX VDE pliers

DIN ISO 5746 | DIN ISO 5745 | DIN ISO 5749

VDE-tested, 1000 V

VDE combination pliers

- DIN ISO 5746
- Cutting edges for hard and soft wire, long cutting edges for thicker cables
- Oil-hardened special tool steel, chrome-plated head, cutting edges induction-hardened to approx. 60 HRc

Total length mm	VDE 2K handle art.no.	€
160	**711100** 0160	17,05
180	711100 0180	18,40
200	711100 0200	20,55
	7131	

711100 0180

VDE wire-stripping pliers

- Grub screw for adjusting to the desired wire or stranded wire Ø,
- Special tool steel, oil-hardened with chrome-plated head

Total length mm	Design	VDE 2K handle art.no.	€
160	With opening spring; for stranded wires up to max. 5 mm in diameter or 10 mm²	**711101** 0160	21,30
		7131	

VDE needle-nose pliers with cutting edge (stork beak pliers)

- DIN ISO 5745
- High-strength, resilient precision tips, toothed jaws
- Oil-hardened vanadium steel, chrome-plated head, cutting edges induction-hardened to approx. 59 HRc

Total length mm	Design	VDE 2K handle art.no.	€
200	Straight jaws	**711012** 0200	23,20
200	40° angled jaws	711103 0200	26,05
		7131	

711012 0200

711103 0200

VDE diagonal cutting pliers

- DIN ISO 5749
- For hard and soft wires
- Vanadium electrical steel, chrome-plated head, cutting edges induction-hardened to approx. 62 HRc

Total length mm	VDE 2K handle art.no.	€
140	**711104** 0140	19,45
160	711104 0160	20,90
180	711104 0180	22,50
	7131	

VDE heavy-duty diagonal cutting pliers

- DIN ISO 5749
- Forged joint axle to withstand maximum strain
- High cutting capacity with low force application,
- Hardened chrome vanadium electrical steel, cutting edges induction-hardened to approx. 64 HRc

711105 0200

Total length mm	VDE 2K handle art.no.	€
160	**711105** 0160	25,75
180	711105 0180	27,80
200	711105 0200	29,50
250	711105 0250	*37,70*
	7131	

VDE pliers set

- 3 pieces

Contents	art.no.	€
VDE combination pliers, 180 mm, 2K handle (711100 0180); VDE needle-nose pliers, 200 mm, 2K handle (711102 0200); VDE diagonal cutting pliers, 160 mm, 2K handle (711104 0160)	**710600** 2012	62,50
	7131	

wiha TriCut Professional electric installation pliers

- Manufactured in accordance with IEC 60900:2012
- **With three functions: Cutting, cable stripping, wire stripping**
- Low-wear inlaid joint with heavy-duty riveting
- Diagonal cutting pliers with durable cutting edges thanks to additional induction hardening to approx. 64 HRc
- Ergonomic and energy-saving cable and wire stripping with both cable and pliers in a lengthways alignment thanks to the special offset head
- High-quality tool steel, C70, specially hardened and tempered
- For working on conductive parts up to 1,000 V AC

A world first!

Total length mm	art.no.	€
170	**711046** 0170	34,60
	7110	

ATORN® Pincers (end nippers)

DIN ISO 9243 A

- Special tool steel, oil-hardened
- Polished head
- Black phosphate-treated handle, or with PVC-coated handle and a striking surface on one side

With lateral striking surface

Total length mm	Black art.no.	€	PVC art.no.	€
160	**710100** 0160	*8,80*		
180	710100 0180	*8,60*	**710101** 0180	10,20
200	710100 0210	9,20	710101 0210	11,20
250	710100 0250	12,40		
	7130		7130	

Mechanic's nippers

DIN 9242

- **Tower pincers, rabbit pincers, mechanic's nippers**
- For attaching, twisting and cutting tie-wire when working with steel mesh
- Smooth operation and precise cutting
- For soft and hard wires

Total length mm	art.no.	€
220	**710105** 0220	9,95
250	710105 0250	11,15
280	710105 0280	12,45
	7130	

ATORN® Corner pipe wrench

DIN 5234

- Chrome vanadium steel, forged and powder-coated
- Double T-profile wrench lever
- Induction-hardened jaws
- Teeth offset against the direction of rotation
- Reinforced clamp
- Adjusting nut locking mechanism

45° angled jaw

for pipe Ø in	Total length mm	Jaw aperture mm	art.no.	€
1"	320	0 - 42	**712001** 0010	27,–
1 1/2"	430	0 - 60	712001 0015	37,90
2"	570	0 - 70	712001 0020	54,50
			7130	

90° angled jaw

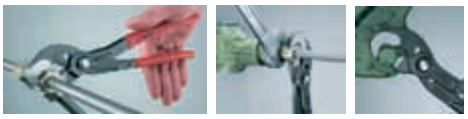
for pipe Ø in	Total length mm	Jaw aperture mm	art.no.	€
1"	310	0 - 42	**712002** 0010	24,–
1 1/2"	420	0 - 60	712002 0015	35,10
2"	560	0 - 70	712002 0020	51,60
			7130	

S-jaw head

for pipe Ø in	Total length mm	Jaw aperture mm	art.no.	€
1"	315	0 - 42	**712011** 0010	24,80
1 1/2"	420	0 - 60	712011 0015	33,20
2"	530	0 - 70	712011 0020	55,50
			7130	

KNIPEX Multiple slip joint pliers

- **Patented**
- Grips nuts and screws from 10 to 32 mm AF without play
- **Self-clamping from 17 to 32 mm:** no workpiece slippage
- Quickly tightens and loosens threaded connections using the ratchet principle
- Ideal for counter-tightening
- Box joint
- One-handed fine adjustment with **15 setting positions** at the push of a button
- Chrome vanadium steel, oil-hardened and tempered



Description	Total length mm	art.no.	€
For nuts sized 10 - 32 mm or 3/8" - 1 1/4" AF	250	**710624** 0250	22,–
		7131	

ATORN® Locking pliers, adjustable

4-position quick adjustment

- Wide span thanks to the adjustable lower jaw
- For holding profiles, flat materials and pipes securely
- Toothed gripper jaws, sturdy body
- **Material:** Chrome vanadium steel gripper jaws

L mm	Clamp width mm	art.no.	€
250	80 / 100	**712500** 0250	41,95
		7133	

Clamping pliers

Long-nose clamping pliers

- With wire cutter
- For universal applications
- Extremely suitable for working in confined areas that are hard to access
- Micro adjusting screw for precise clamping to control jaw movement

Total length mm	Clamping jaw thickness mm	Clamping jaw width mm	art.no.	€
170	5 - 12	57 - 25	**712501** 0150	17,25
210	6 - 14	76 - 44	712501 0230	24,60

7133

Locking pliers with angled jaws

- With wire cutter for wire gauges up to 6.5 mm

Total length mm	Clamping jaw thickness mm	Clamping jaw width mm	art.no.	€
135	9	32	**712505** 0130	10,35
190	12	41	712505 0180	12,75
230	13	48	712505 0250	17,–

7133

Locking pliers with straight jaws

- For universal applications

Total length mm	Clamping jaw thickness mm	Clamping jaw width mm	art.no.	€
225	17	38	**712510** 1250	17,–

7133

C-type clamping pliers

- For clamping work, high clamping force

Total length mm	Clamp width mm	Projection mm	art.no.	€
280	17	65	**712515** 0280	*29,85*

7133

C-type clamping pliers with movable jaws

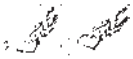
- For clamping work on particularly sensitive surfaces
- High clamping force

Total length mm	Clamp width mm	Projection mm	art.no.	€
180	0-50	35	**712520** 0150	25,75
280	0-95	65	712520 0280	34,65

7133

Special locking pliers

- For all sheet metal work
- For gripping, bending, folding, moulding, riveting, soldering etc.

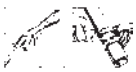


Total length mm	Clamp width mm	Clamping jaw depth mm	art.no.	€
210	80	44	**712525** 0200	30,40

7133

Welder's grip pliers

- Clamps ultra-thin parts
- Great freedom of movement due to the possibility of one-handed use
- Long-reach clamping jaws
- Extensive visibility and working space



Total length mm	Jaw aperture mm	art.no.	€
225	40	**712535** 0230	24,35

7133

ATORN® Circlip pliers

DIN 5254 B | DIN 5256 C | DIN 5256 D | DIN 5254 A

- Chrome vanadium steel, polished joint
- PVC-coated handle

External pliers, tips angled 90°, type B

- DIN 5254 B

Type	for external fixture Ø mm	Total length mm	PVC dipped handle art.no.	€
A01	3 - 10	139	**711555** 1001	10,40
A11	10 - 25	140	711555 1011	10,–
A21	19 - 60	180	711555 1021	10,80
A31	40 - 100	225	711555 1031	12,20
A41	85 - 165	310	711555 1041	20,80

7130

Internal pliers, straight tips, type C

- DIN 5256 C

Type	for interior securing Ø mm	Total length mm	PVC dipped handle art.no.	€
J0	8 - 13	139	**711560** 2000	8,40
J1	12 - 25	140	711560 2001	8,40
J2	19 - 60	180	711560 2002	8,80
J3	40 - 100	225	711560 2003	10,80
J4	85 - 165	310	711560 2004	18,20

7130

Internal pliers, tips angled 90°, type D

- DIN 5256 D

Type	for interior securing Ø mm	Total length mm	PVC dipped handle art.no.	€
J01	8 - 13	139	**711565** 3010	9,20
J11	10 - 25	140	711565 3011	9,20
J21	19 - 60	180	711565 3021	9,60
J31	40 - 100	225	711565 3031	11,40
J41	85 - 165	310	711565 3041	19,40

7130

External pliers, straight tips, type A

- DIN 5254 A

Type	for external fixture Ø mm	Total length mm	PVC dipped handle art.no.	€
A0	3 - 10	139	**711550** 0000	9,60
A1	10 - 25	140	711550 0001	8,80
A2	19 - 60	180	711550 0002	9,80
A3	40 - 100	225	711550 0003	11,60
A4	85 - 165	310	711550 0004	19,80

7130

Circlip pliers sets

- DIN 5254A/5256C
- For internal and external circlips

Description	Contents	art.no.	€
8 pieces, boxed	J1, J2, J11, J21, A1, A2, A11, A21	**710490** 1008	76,–
8 pieces in a roll-up case	J1, J2, J11, J21, A1, A2, A11, A21	710490 2008	84,–

7130

ATORN® Electronics pliers

DIN ISO 9655 | DIN ISO 9654

- Chrome vanadium steel
- Joint surfaces polished and phosphate-treated
- 2-component shell (2K)

Needle-nose electronics pliers, 30° angled tip

- DIN ISO 9655

Total length mm	2K handle art.no.	€
125	**711506** 0125	17,80

7130

Needle-nose electronics pliers, straight

- DIN ISO 9655

Total length mm	2K handle art.no.	€
125	**711510** 2130	17,–
	7130	

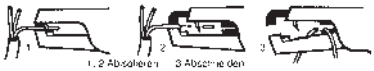
Diagonal cutting electronics pliers, made from special steel

- DIN ISO 9654

Total length mm	Design	2K handle art.no.	€
112	For hardened steel wire (piano wire)	**711515** 3110	17,–
112	No blade bevel; for copper wire, diameter 0.5 - 2.0 mm	711515 3111	18,–
112	With retaining spring; for hardened steel wire (piano wire)	711515 3112	19,80
112	With retaining spring, no blade bevel; for copper wire, diameter 0.5 - 2.0 mm	711515 3113	20,80
		7130	

JOKARI Automatic wire-stripping pliers

- External diagonal cutter for wires up to 2.5 mm²
- No need for adjustments to fit the wire gauge



Working area mm²	art.no.	€
0.5 - 4.0	**710550** 0180	19,95
	7130	

ATORN® Wire-stripping and cutting tool

- For stripping and cutting fine-stranded and solid wires with PVC insulation
- Clamping jaws open automatically after the stripping process

Working area mm²	art.no.	€
0.08 - 6.0	**710553** 0190	61,95
	7130	

ATORN® Crimping tool

- For PVC and polyamide-insulated connectors
- For cable lugs, pin terminals, parallel and serial connectors, and plug connectors

Working area mm²	art.no.	€
0.5 - 6.0	**710552** 0235	82,95
	7130	

Cable end sleeve/lug set

- Insulated cable-end sleeves and connectors (plastic collars)

Contents	art.no.	€
600 ring terminals, pin terminals, butt connectors and blade receptacles from 0.5 to 6 mm²	**710554** 0001	59,45
2,000 cable end sleeves from 0.5 to 16 mm²	710554 0002	84,95
	7130	

ATORN® Cable-end sleeve set

- Cable-end sleeve crimping pliers, 0.5 - 4 mm²with dipped handle covering

Contents	art.no.	€
0.5 / 0.75 / 1.5 / 2.5 mm² insulated cable end sleeves (100 of each) and 4 mm² cable end sleeves (50 pieces); voltage tester; pliers	**710556** 0001	30,20
	7130	

Chisel

DIN 6453 | DIN 6451 | DIN 7254 B

- Striking head and shank hardened and tempered to 38 - 46 HRc, cutting edge 55 - 58 HRc
- Shank with baked enamel finish, blade and cutting edge blank ground
- **Material:** Chrome vanadium air-hardened steel

Flat chisel, DIN 6453

- Flat oval shank

Length mm	Shank width mm	Shank height mm	Cutting edge width mm	art.no.	€
125	14	9	15	**720101** 0125	3,65
150	17	11	18	720101 0150	3,65
175	20	12	21	720101 0175	4,20
200	23	13	24	720101 0200	5,05
250	23	13	25	720101 0250	5,80
300	23	13	26	720101 0300	6,55

7134

Cross-cut chisel, DIN 6451

- Flat oval shank

Length mm	Shank width mm	Shank height mm	Cutting edge width mm	art.no.	€
125	14	9	5	**720105** 0125	3,65
150	17	11	6	720105 0150	4,–
175	17	11	7	720105 0175	4,20
200	20	12	8	720105 0200	4,85
250	23	13	9	720105 0250	6,90

7134

Masonry chisel, DIN 7254 B

- Octagonal shank

Length mm	Shank width mm	Cutting edge width mm	art.no.	€
200	16	26	**720136** 2016	4,95
300	18	29	720136 3018	6,90
400	18	29	720136 4018	8,35
500	20	32	720136 5020	*11,15*

7134

Splitting chisel, bodywork chisel

- Flat oval shank

Length mm	Shank width mm	Shank height mm	Cutting edge width mm	art.no.	€
240	26	13	26	**720137** 2413	7,20

7134

Electrician's chisel

- Striking head hardened and tempered
- Shank with baked enamel finish, blade and cutting edge blank ground
- **Material:** Chrome vanadium air-hardened steel

Length mm	Shank width mm	Cutting edge width mm	art.no.	€
200	6	8	**720139** 2008	3,10
250	6	8	720139 2508	*3,30*
250	8	10	720139 2510	3,25
250	10	12	720139 2512	3,40

7134

Tool sets

- 6 pieces Sets
- Shank with baked enamel finish
- **Material:** Chrome vanadium air-hardened steel

720135 0006

720135 1006

Packaging	Contents	art.no.	€
6 pieces Plastic stand	1x flat chisel, 125 x 10 x 12 mm 1x flat chisel 150 x 12 x 16 mm 1x cross-cut chisel, 125 x 10 mm 1x centre punch, 120 x 10 mm 1x drift, 120 x 10 x 2 mm 1x drift, 150 x 12 x 4 mm	**720135** 0006	18,15
6 pieces Metal box	1x flat chisel, 125 x 10 x 12 mm 1x flat chisel, 150 x 12 x 16 mm 1x cross-cut chisel, 125 x 10 mm 1x centre punch, 120 x 10 mm 1 drift, 120 x 10 x 2 mm 1 drift, 150 x 12 x 4 mm	720135 1006	23,30

7134

Centre punch

DIN 7250

- Octagonal
- Impact-resistant head, shank with baked enamel finish
- **Material:** Chrome vanadium air-hardened steel

Centre punch
- DIN 7250

Length mm	Shank Ø mm	art.no.	€
100	8	**720110** 1008	1,35
120	10	720110 1209	1,45
120	12	720110 1210	1,70
150	12	720110 1211	1,90

7134

Carbide-tipped centre punch
(not compliant with DIN 7250)

Length mm	Shank Ø mm	art.no.	€
120	10	**720111** 1210	13,55
130	14	720111 1314	20,75

7134

Wad punch

DIN 7200 A

- Conical relief, head ground and polished, baked enamel finish
- **Material:** Die-forged special steel

Individual

Ø mm	art.no.	€
2	**720112** 0002	4,05
3	720112 0003	4,05
4	720112 0004	4,05
5	720112 0005	4,05
6	720112 0006	4,05
7	720112 0007	4,05
8	720112 0008	4,30
9	720112 0009	4,45
10	720112 0010	4,75
11	720112 0011	5,40
12	720112 0012	6,15

7134

Ø mm	art.no.	€
13	720112 0013	6,55
14	720112 0014	7,10
15	720112 0015	7,85
16	720112 0016	8,50
17	720112 0017	9,25
18	720112 0018	9,80
19	720112 0019	10,15
20	720112 0020	11,35
21	720112 0021	12,15
22	720112 0022	13,10
23	720112 0023	13,55

7134

Ø mm	art.no.	€
24	720112 0024	*14,05*
25	720112 0025	16,50
26	720112 0026	17,40
27	720112 0027	18,05
28	720112 0028	20,80
29	720112 0029	*21,45*
30	720112 0030	21,70
31	720112 0031	23,10
32	720112 0032	23,80
33	720112 0033	*24,40*
34	720112 0034	*25,–*

7134

Ø mm	art.no.	€
35	720112 0035	25,80
40	720112 0040	36,45
42	720112 0042	46,25
44	720112 0044	47,25
46	720112 0046	48,75
48	720112 0048	*51,20*
50	720112 0050	*54,50*
55	720112 0055	*88,10*
60	720112 0060	*119,90*
65	720112 0065	*132,45*
70	720112 0070	*189,30*

7134

Sets

Packaging	Contents	art.no.	€
6 pieces Plastic pouch	1 of each: 3, 6, 8, 10, 16, 20 mm	**720113** 0006	41,95
8 pieces Plastic pouch	1 of each: 3, 6, 8, 10, 12, 16, 20, 25 mm	720113 0008	65,15
12 pieces Synthetic leather pouch	1 of each: 3, 5, 6, 8, 10, 12, 13, 14, 16, 19, 22, 25 mm	720113 0012	106,–

7134

Drift

DIN 6458

- Octagonal
- Impact-resistant head, shank with baked enamel finish
- **Material:** Chrome vanadium air-hardened steel

Length mm	Shank Ø mm	Point Ø mm	art.no.	€
120	10	1	**720125** 0001	*1,45*
120	10	2	720125 0002	*1,40*
120	10	3	720125 0003	1,40
120	10	4	720125 0004	1,40
120	10	5	720125 0005	*1,40*
120	10	6	720125 0006	1,40
120	12	7	720125 0007	1,60
120	12	8	720125 0008	*1,60*
120	12	10	720125 0010	1,60

7134

720130 0006

720130 1006

Sets

- DIN 7255

Packaging	Contents	art.no.	€
6 pieces Plastic stand	1 drift in each size: 120 x 10 x 1, 2, 3, 4, 5 mm; 1 centre punch, 120 x 10 mm	**720130** 0006	10,95
6 pieces Metal box	1 drift in each size: 120 x 12 x 1 mm and 120 x 10 x 2, 3, 4, 5 mm; 1 centre punch, 120 x 10 mm	720130 1006	20,95

7134

Pin punch

DIN 6450C

- Octagonal
- Impact-resistant head, shank with baked enamel finish, driving surface blank ground
- **Material:** Chrome vanadium air-hardened steel

Length mm	Shank Ø mm	Point Ø mm	art.no.	€
150	10	2	**720115** 0002	2,15
150	10	2.5	720115 0025	2,15
150	10	3	720115 0003	2,05
150	10	3.5	720115 0035	2,15
150	10	4	720115 0004	2,05
150	10	4.5	720115 0045	2,15
150	10	5	720115 0005	2,–
150	10	6	720115 0006	2,–
150	12	7	720115 0007	2,25
150	12	8	720115 0008	2,25
150	12	10	720115 0010	2,25
150	14	12	720115 0012	2,70

7134

720120 0006

720120 1006

Sets

Shank Ø mm	Packaging	Contents	art.no.	€
10	6 pieces Plastic stand	1 of each: 3, 4, 5, 6, 7, 8 mm	**720120** 0006	15,30
10	6 pieces Metal box	1 of each: 3, 4, 5, 6, 7, 8 mm	720120 1006	20,20

7134

ATORN® Soft face hammer

- Inserts: Blue cellulose acetate, both sides
- Base body made from high-quality die-cast zinc with impact-resistant handle
- Wooden handle - made from seasoned ash

Soft face hammer

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
25	86	270	240	**720567** 0025	13,50
30	95	280	370	720567 0030	19,20
40	107	325	630	720567 0040	28,50
50	115	340	950	720567 0050	39,20

7118

Inserts

Head Ø mm	art.no.	€
25	**720568** 0025	2,80
30	720568 0030	3,30
40	720568 0040	6,10
50	720568 0050	9,20

7118

ATORN® Soft face hammer, non-rebound

- Replaceable striking heads made from shatter-proof polyurethane
- Shaft made from precision steel tubing, powder-coated
- Ergonomically designed rubber handle
- Hammer body filled with cast iron balls for rebound-free work
- Full impact on metal while protecting joints and muscles by preventing rebound

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
30	116	351	460	**720565** 0030	25,60
40	126	376	580	720565 0040	29,–
50	136	386	760	720565 0050	38,40

7118

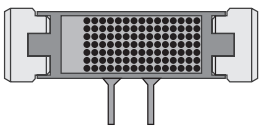
Inserts

Head Ø mm	art.no.	€
30	**720566** 0030	2,80
40	720566 0040	3,95
50	720566 0050	5,20

7118

HALDER NORM+TECHNIK Supercraft soft face hammer

- **Non-rebound**
- Replaceable white nylon (hard) hammer heads



With hickory handle

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
25	105	305	325	**720560** 0025	22,15
30	110	330	460	720560 0030	23,30
35	110	335	560	720560 0035	25,70
40	115	360	715	720560 0040	29,55
50	120	370	990	720560 0050	37,25
60	145	370	1,705	720560 0060	64,–
70	150	370	2215	720560 0070	81,80
80	168	380	3210	720560 0080	139,30

7118

With 3-component handle

- Consisting of a fibreglass core with a polypropylene layer and non-slip elastomer layer

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
40	116	370	790	**720571** 0040	41,25
50	120	380	1,040	720571 0050	50,95
60	145	390	1,625	720571 0060	81,80

7118

Spare nylon inserts

Head Ø mm	art.no.	€
25	**720570** 0025	2,50
30	720570 0030	2,90
35	720570 0035	3,35
40	720570 0040	4,10
50	720570 0050	5,25
60	720570 0060	8,75
70	720570 0070	*13,–*
80	720570 0080	*17,35*

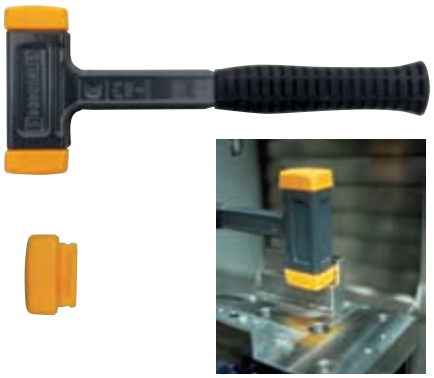
7118

HALDER NORM+TECHNIK *SECURAL* soft face hammer

- **Non-rebound**
- **Rectangular striking surface**
- Formed sheet steel casing
- Ergonomic rubber handle
- Replaceable polyurethane inserts (soft)
- Universal applications
- High safety standard

Description	Weight g	art.no.	€
Head dimensions 30 x 40 mm	700	**720561** 0700	32,05

7118



Spare insert

Description	art.no.	€
1 spare insert, 30 x 40 mm	**720562** 0700	3,35

7118

HALDER NORM+TECHNIK *SIMPLEX* soft face hammer

- Malleable cast iron body and wooden handle
- Replaceable inserts
- Central three-point fixture

With nylon inserts, white, hard

- Assembly and repair work (automotive sector), joining workpieces, panel finishing,
- panel-beating work, casing assembly, mould-making, assembly of sharp-edged workpieces

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
30	90	300	335	**720540** 0030	17,40
40	110	330	610	720540 0040	24,–
50	135	350	1,145	720540 0050	37,60
60	145	405	1,510	720540 0060	48,85
80	175	490	3,090	720540 0080	82,25

7118

With black composite rubber (medium-hard) and red plastic (hard) inserts

- Assembly and repair work (automotive sector), joining workpieces,
- repair and maintenance work, body construction, panel-beating

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
30	90	300	340	**720544** 0030	14,10
40	110	330	630	720544 0040	19,05
50	135	350	1,150	720544 0050	26,85
60	145	405	1,550	720544 0060	34,80

7118

With black composite rubber (medium-hard) and black superplastic (medium-hard) inserts

- Joining workpieces, scaffolding work, casing assembly

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
30	90	300	335	**720572** 0030	14,80
40	110	330	635	720572 0040	19,80
50	135	350	1,105	720572 0050	28,20
60	145	405	1,510	720572 0060	36,35
80	175	490	2,770	720572 0080	66,15

7118

Spare inserts, individual

Head Ø mm	Nylon, white, hard art.no.	€	Soft metal, silver, hard art.no.	€	Rubber, black, medium hard art.no.	€	Plastic, red, hard art.no.	€	Superplastic, white, medium-hard art.no.	€
30	**720550** 0030	4,15	**720552** 0030	5,35	**720554** 0030	2,50	**720555** 0030	2,50	**720556** 0030	4,10
40	720550 0040	6,40	720552 0040	7,50	720554 0040	3,30	720555 0040	4,60	720556 0040	6,70
50	720550 0050	11,05	720552 0050	12,70	720554 0050	4,30	720555 0050	7,10	720556 0050	10,45
60	720550 0060	15,10	720552 0060	16,85	720554 0060	6,20	720555 0060	9,95	720556 0060	14,10
80	720550 0080	24,30	720552 0080	29,10	720554 0080	10,85			720556 0080	*26,45*
	7118		7118		7118		7118		7118	

Spare malleable cast iron body

- Complete with screw, nut and spring lock washer

Head Ø mm	art.no.	€
30	**720546** 0030	*5,75*
40	720546 0040	7,70
50	720546 0050	*11,10*
60	720546 0060	14,05
80	720546 0080	*27,95*
	7118	

Spare wooden handle

for head Ø mm	Length mm	art.no.	€
30	260	**720547** 0030	3,45
40	275	720547 0040	3,55
50	310	720547 0050	4,40
60	335	720547 0060	4,65
80	395	720547 0080	5,80
		7118	

HALDER FERROPLEX 2-in-1 multi-function hammer

- **Engineering hammer and soft face hammer combined**
- Hammer head made from high-quality hardened and tempered steel
- Replaceable nylon insert
- Hammer face carefully hardened and tempered
- Tubular steel shaft made from seamlessly drawn precision steel tubing, securely and permanently attached to the hammer head with a press fitting
- Comfortable rubber handle with damping effect
- Red marking ring clearly identifies the different striking surfaces
- Universally suitable for service and assembly work

Head Ø mm	Head length mm	Length mm	Weight g	art.no.	€
30	104	290	600	**720575** 0030	25,20
35	104	295	800	720575 0035	25,70
				7118	

Spare nylon inserts

Head Ø mm	art.no.	€
30	720570 0030	2,90
35	720570 0035	3,35
	7118	

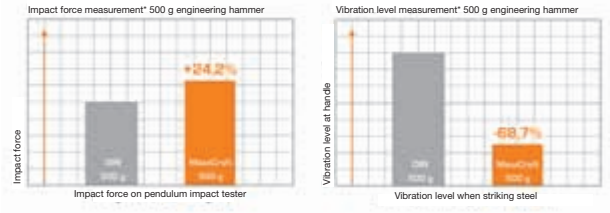
ATORN® 3K engineering hammer

- With unbreakable 3-component handle (aluminium core, polyamide and rubber components)
- Forged protective shaft collar and additional protective shaft sleeve
- Vibration-free and joint-friendly hammering
- Ergonomic and non-slip handling

Weight g	art.no.	€
300	**720506** 0300	17,–
500	720506 0500	19,55
1,000	720506 1000	27,50
1,500	720506 1500	30,65
2,000	720506 2000	38,90
	7116	

HALDER NORM+TECHNIK *MaxxCraft* engineering hammer

- **Joint-friendly, reduced rebound, more impact force**
- Forged hammer head, standard edge chamfering
- Specially connected hammer head and handle sleeve
- Non-detachable, vibration-resistant unit
- Ergonomically shaped hickory handle


Impact force measurement* 500 g engineering hammer
Impact force
+24.2%
Impact force on pendulum impact tester
Vibration level measurement* 500 g engineering hammer
Vibration level at handle
-68.7%
Vibration level when striking steel

Weight g	Length mm	art.no.	€
300	300	**720563** 0300	18,65
500	320	720563 0500	22,40
800	350	720563 0800	28,10
1,000	360	720563 1000	31,65
		7118	

Spare hickory handles

suitable for g	Length mm	art.no.	€
300	265	**720564** 0300	4,45
500	280	720564 0500	*4,95*
800	305	720564 0800	*5,50*
1,000	310	720564 1000	6,50
		7118	

Engineering hammers

- **DIN 1041**
- Forged hammer head
- Carefully hardened and tempered chrome vanadium steel with black powder coating
- Bright-ground face and peen, standard edge chamfering
- **Ash or hickory handle**
- VPA/GS-tested

Weight g	Stem length mm	**Ash handle** art.no.	€	**Hickory handle** art.no.	€
100	260	**720505** 0100	4,70	**720501** 0100	5,55
200	280	720505 0200	5,70	720501 0200	7,40
300	300	720505 0300	6,90	720501 0300	8,–
400	310	720505 0400	7,80	720501 0400	9,15
500	320	720505 0500	8,40	720501 0500	9,75
800	350	720505 0800	11,95	720501 0800	13,95
1,000	360	720505 1000	12,80	720501 1000	15,05
1,500	380	720505 1500	14,55	720501 1500	16,50
2,000	400	720505 2000	17,15	720501 2000	19,95
		7116		7116	

Sledgehammers

- **DIN 1042**
- Forged hammer head
- Carefully hardened and tempered chrome vanadium steel with black powder coating
- Bright-ground face and peen, standard edge chamfering
- **Hickory handle**
- VPA/GS-tested

Weight g	Stem length mm	art.no.	€
3,000	600	**720520** 3000	20,35
4,000	600	720520 4000	*25,30*
5,000	700	720520 5000	31,15
6,000	700	720520 6000	34,75
		7116	

Club hammer

- **DIN 6475**
- Forged hammer head
- Carefully hardened and tempered chrome vanadium steel with black powder coating
- Faces blank ground, standard edge chamfering
- **Ash handle**
- VPA/GS-tested

Weight g	Stem length mm	art.no.	€
1,000	260	**720530** 1000	8,30
1,250	260	720530 1250	9,55
1,500	280	720530 1500	10,45
2,000	300	720530 2000	12,55

7116

NC Automation *MarkingStar* CNC marking tool

CNC marking tool

- Process-integrated marking and labelling
- Suitable for marking a wide variety of materials
- Surface is compacted and reinforced, not weakened or damaged
- High level of wear-resistance for a long service life
- Also suitable for thin-walled workpieces
- Burr-free marking line
- High-quality lettering
- Compensates for workpiece unevenness
- Also suitable for marking round surfaces (up to 15°)
- Depending on version, can be used to mark surfaces with a hardness of up to 57 HRc
- Generates no noise
- **Save money - over 75 % less time spent on marking**
- **Note:** The greater the eccentricity and the higher the spindle speed (or the lower the feed rate), the deeper the marking. The rule of thumb for clean lettering is: **feed (mm/min) x 10 = spindle speed (rpm)**
- Change needles in a flash: The marking needle is pulled out and changed using pliers. This is also an advantage if the needle slips or breaks off

730010 0200

730010 0500

Design	appropriate for	Description	art.no.	€
Slimline	Various materials such as aluminium, titanium, steel, bronze, copper, brass, plastics, etc.	Compensates for workpiece unevenness up to 9 mm	**730010** 0100	399,–
Small	Various materials such as aluminium, titanium, steel, bronze, copper, brass, plastics, etc.	Compensates for workpiece unevenness up to 3 mm	730010 0200	349,–
Medium	Various materials such as aluminium, titanium, steel, bronze, copper, brass, plastics, etc.	Compensates for workpiece unevenness up to 6 mm	730010 0300	499,–
Large	Various materials such as aluminium, titanium, steel, bronze, copper, brass, plastics, etc.	Compensates for workpiece unevenness up to 6 mm	730010 0400	699,–
Extra-large	Uneven and rough surfaces with large lettering and thick lines at a hardness of up to 50 HRc	Compensates for workpiece unevenness up to 7 mm	730010 0500	799,–

7172

Marking needles

- Rolling: Marking by means of material compaction and displacement. This means that the marking is created by the rounded point, which is also referred to as a "ball". The optimum radius of these "balls" varies depending on the material to be marked, the width and depth of the lines, and the size of the lettering
- Swaging: Marking by means of material compaction, displacement and "swaging" as the marking needle rotates. This involves the use of an eccentrically ground needle, which is turned by a spindle to produce a significantly clearer marking than with conventional rolling

appropriate for	Design	Description	r mm	art.no.	€
Slimline	Rolling needle	Very thin lines	0.3	**730011** 0101	300,–
Slimline	Rolling needle	Thin lines	0.5	730011 0102	300,–
Small	Rolling needle	Very thin lines	0.3	730011 0201	300,–
Small	Rolling needle	Thin lines	0.3	730011 0202	300,–
Medium	Rolling needle	Thin lines	0.5	730011 0301	300,–
Medium	Rolling needle	Thick lines	1.0	730011 0302	300,–
Large	Rolling needle	Thin lines	0.5	730011 0401	300,–
Large	Rolling needle	Thick lines	1.0	730011 0402	300,–
Large	Swaging needle	Thick and deep lines	1.0	730011 0403	300,–
Large	Swaging needle	Very thick and deep lines	1.0	730011 0404	300,–
Large	Swaging needle	Extra-thick and deep lines	1.0	730011 0405	300,–
Extra-large	Rolling needle	Thin lines	0.5	730011 0501	300,–
Extra-large	Rolling needle	Thick lines	1.0	730011 0502	300,–
Extra-large	Swaging needle	Thick and deep lines	1.0	730011 0503	300,–
Extra-large	Swaging needle	Very thick and deep lines	1.0	730011 0504	300,–
Extra-large	Swaging needle	Extra-thick and deep lines	1.0	730011 0505	300,–

7172

PRYOR Interchangeable steel type

- Special steel with precision design
- Suitable for marking steel up to 1,300 N/mm² in strength
- Set consists of 1 hand-held holder and 100 individual steel type pieces
- Several pieces of steel type can be inserted side by side in the holder.
- The precise design of the holder and the steel type produces clean, clear lettering with uniform spacing.
- For labelling name or rating plates as well as tools, machine parts etc.
- **Normal type:** the punched marking is directly legible

A	A	A	B	B	C	C	D	D	E	E	E	E	F	F	G	G	H	H	I
I	I	J	J	K	K	L	L	L	M	M	N	N	N	O	O	O	P	P	Q
R	R	R	S	S	S	T	T	U	U	U	V	W	W	X	X	Y	Z	&	/
/	–	–	.	.	,	,	1	1	1	1	2	2	2	2	3	3	3	4	4
4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	0	0	0

Set composition (complete sets)

Font size measurement

1.0mm	234ABC
1.5mm	234ABC
2.0mm	234ABC
2.5mm	234ABC
3.0mm	234ABC
4.0mm	234ABC
5.0mm	234AB
6.0mm	234A
10.0mm	234

Typeface and font size

Complete sets with hand-held holders

Typeface height mm	max. support capacity of holder	art.no.	€
1.5	12	**731001** 0015	349,–
2.5	12	731001 0025	359,–
3.0	9	731001 0030	359,–
5.0	8	731001 0050	399,–
6.0	6	731001 0060	679,–
		7140	

Hand-held holder, individual

Type	for font height mm	art.no.	€
H3.2-20	1.0 / 1.5	**731010** 1015	89,–
H6.35-29	2.5 / 3.0	731010 2530	99,–
H8.0-39	5.0	731010 0050	106,–
H9.6-40	6.0	731010 0060	255,–
		7140	

Steel type sets

- Prices per set

Typeface height mm	Numerals 0 - 9 art.no.	€	Letters A - Z art.no.	€
1.5	**731030** 0200	55,90	**731040** 0200	145,50
2.5	731030 0300	55,90	731040 0300	145,50
3.0	731030 0400	55,90	731040 0400	145,50
5.0	731030 0500	65,30	731040 0500	169,50
6.0	731030 0600	96,50	731040 0600	251,–
	7140		7140	

10 identical steel type pieces

- Unit prices when purchased in packs

Engraving	1.5 mm art.no.	€	2.5 mm art.no.	€	3.0 mm art.no.	€	5.0 mm art.no.	€	6.0 mm art.no.	€
0	10 **731050** 0200	7,25	10 **731050** 0300	7,25	10 **731050** 0400	7,25	10 **731050** 0500	8,95	10 **731050** 0600	12,75
1	10 731050 0201	7,25	10 731050 0301	7,25	10 731050 0401	7,25	10 731050 0501	8,95	10 731050 0601	12,75
2	10 731050 0202	7,25	10 731050 0302	7,25	10 731050 0402	7,25	10 731050 0502	8,95	10 731050 0602	12,75
3	10 731050 0203	7,25	10 731050 0303	7,25	10 731050 0403	7,25	10 731050 0503	8,95	10 731050 0603	12,75
4	10 731050 0204	7,25	10 731050 0304	7,25	10 731050 0404	7,25	10 731050 0504	8,95	10 731050 0604	12,75
5	10 731050 0205	7,25	10 731050 0305	7,25	10 731050 0405	7,25	10 731050 0505	8,95	10 731050 0605	12,75
6	10 731050 0206	7,25	10 731050 0306	7,25	10 731050 0406	7,25	10 731050 0506	8,95	10 731050 0606	12,75
7	10 731050 0207	7,25	10 731050 0307	7,25	10 731050 0407	7,25	10 731050 0507	8,95	10 731050 0607	12,75
8	10 731050 0208	7,25	10 731050 0308	7,25	10 731050 0408	7,25	10 731050 0508	8,95	10 731050 0608	12,75
9	10 731050 0209	7,25	10 731050 0309	7,25	10 731050 0409	7,25	10 731050 0509	8,95	10 731050 0609	12,75
A	10 731050 0220	7,25	10 731050 0320	7,25	10 731050 0420	7,25	10 731050 0520	8,95	10 731050 0620	12,75
B	10 731050 0221	7,25	10 731050 0321	7,25	10 731050 0421	7,25	10 731050 0521	8,95	10 731050 0621	12,75
C	10 731050 0222	7,25	10 731050 0322	7,25	10 731050 0422	7,25	10 731050 0522	8,95	10 731050 0622	12,75
D	10 731050 0223	7,25	10 731050 0323	7,25	10 731050 0423	7,25	10 731050 0523	8,95	10 731050 0623	12,75
E	10 731050 0224	7,25	10 731050 0324	7,25	10 731050 0424	7,25	10 731050 0524	8,95	10 731050 0624	12,75
F	10 731050 0225	7,25	10 731050 0325	7,25	10 731050 0425	7,25	10 731050 0525	8,95	10 731050 0625	12,75
G	10 731050 0226	7,25	10 731050 0326	7,25	10 731050 0426	7,25	10 731050 0526	8,95	10 731050 0626	12,75
H	10 731050 0227	7,25	10 731050 0327	7,25	10 731050 0427	7,25	10 731050 0527	8,95	10 731050 0627	12,75
I	10 731050 0228	7,25	10 731050 0328	7,25	10 731050 0428	7,25	10 731050 0528	8,95	10 731050 0628	12,75
J	10 731050 0229	7,25	10 731050 0329	7,25	10 731050 0429	7,25	10 731050 0529	8,95	10 731050 0629	12,75
	7140		7140		7140		7140		7140	

Engraving		1.5 mm art.no.	€		2.5 mm art.no.	€		3.0 mm art.no.	€		5.0 mm art.no.	€		6.0 mm art.no.	€
K	10	731050 0230	7,25	10	731050 0330	7,25	10	731050 0430	7,25	10	731050 0530	8,95	10	731050 0630	12,75
L	10	731050 0231	7,25	10	731050 0331	7,25	10	731050 0431	7,25	10	731050 0531	8,95	10	731050 0631	12,75
M	10	731050 0232	7,25	10	731050 0332	7,25	10	731050 0432	7,25	10	731050 0532	8,95	10	731050 0632	12,75
N	10	731050 0233	7,25	10	731050 0333	7,25	10	731050 0433	7,25	10	731050 0533	8,95	10	731050 0633	12,75
O	10	731050 0234	7,25	10	731050 0334	7,25	10	731050 0434	7,25	10	731050 0534	8,95	10	731050 0634	12,75
P	10	731050 0235	7,25	10	731050 0335	7,25	10	731050 0435	7,25	10	731050 0535	8,95	10	731050 0635	12,75
Q	10	731050 0236	7,25	10	731050 0336	7,25	10	731050 0436	7,25	10	731050 0536	8,95	10	731050 0636	12,75
R	10	731050 0237	7,25	10	731050 0337	7,25	10	731050 0437	7,25	10	731050 0537	8,95	10	731050 0637	12,75
S	10	731050 0238	7,25	10	731050 0338	7,25	10	731050 0438	7,25	10	731050 0538	8,95	10	731050 0638	12,75
T	10	731050 0239	7,25	10	731050 0339	7,25	10	731050 0439	7,25	10	731050 0539	8,95	10	731050 0639	12,75
U	10	731050 0240	7,25	10	731050 0340	7,25	10	731050 0440	7,25	10	731050 0540	8,95	10	731050 0640	12,75
V	10	731050 0241	7,25	10	731050 0341	7,25	10	731050 0441	7,25	10	731050 0541	8,95	10	731050 0641	12,75
W	10	731050 0242	7,25	10	731050 0342	7,25	10	731050 0442	7,25	10	731050 0542	8,95	10	731050 0642	12,75
X	10	731050 0243	7,25	10	731050 0343	7,25	10	731050 0443	7,25	10	731050 0543	8,95	10	731050 0643	12,75
Y	10	731050 0244	7,25	10	731050 0344	7,25	10	731050 0444	7,25	10	731050 0544	8,95	10	731050 0644	12,75
Z	10	731050 0245	7,25	10	731050 0345	7,25	10	731050 0445	7,25	10	731050 0545	8,95	10	731050 0645	12,75
/	10	731050 0247	7,25	10	731050 0347	7,25	10	731050 0447	7,25	10	731050 0547	8,95	10	731050 0647	12,75
-	10	731050 0248	7,25	10	731050 0348	7,25	10	731050 0448	7,25	10	731050 0548	8,95	10	731050 0648	12,75
.	10	731050 0249	7,25	10	731050 0349	7,25	10	731050 0449	7,25	10	731050 0549	8,95	10	731050 0649	12,75
,	10	731050 0250	7,25	10	731050 0350	7,25	10	731050 0450	7,25	10	731050 0510	8,95	10	731050 0650	12,75
‘	10	731050 0252	7,25	10	731050 0352	7,25	10	731050 0452	7,25	10	731050 0552	8,95	10	731050 0652	12,75
&	10	731050 0246	7,25	10	731050 0346	7,25	10	731050 0446	7,25	10	731050 0546	8,95	10	731050 0646	12,75
“Space”	10	731060 0200	3,35	10	731060 0300	3,35	10	731060 0400	3,35	10	731060 0500	3,35	10	731060 0600	4,15
		7140			7140			7140			7140			7140	

PRYOR Precision hand punch

- Special steel numeral and letter stamps
- Forged blanks with perfectly centred precision engraving
- Stamp hardness 59 - 61 HRc
- Can be used with materials up to 1300 N/mm² in strength
- **Normal type:** the punched marking is directly legible
- **Mirrored type:** the punched marking appears on the workpiece as a mirror image
- Numeral sets = 10 pieces, 0-9
  Letter sets = 27 pieces, A-Z and &
- Plastic box
- Individual punch stamps available on request!

Sets in normal type

Typeface height mm	Shank quadratic x shank length mm	Numerals 0 - 9 art.no.	€	Letters A - Z, & art.no.	€
1.0	6.3 x 63	**730101** 0010	16,40	**730110** 0010	48,50
1.5	6.3 x 63	730101 0015	21,20	730110 0015	53,–
2.0	6.3 x 63	730101 0020	13,80	730110 0020	43,60
2.5	6.3 x 63	730101 0025	14,80	730110 0025	45,50
3.0	6.3 x 63	730101 0030	14,10	730110 0030	45,20
4.0	9.5 x 70	730101 0040	15,–	730110 0040	48,–
5.0	9.5 x 70	730101 0050	16,40	730110 0050	51,70
6.0	9.5 x 70	730101 0060	20,40	730110 0060	57,50
8.0	12.7 x 90	730101 0080	32,90	730110 0080	83,50
10.0	14.3 x 90	730101 0100	43,20	730110 0100	112,–
		7140		7140	

Mirrored type sets

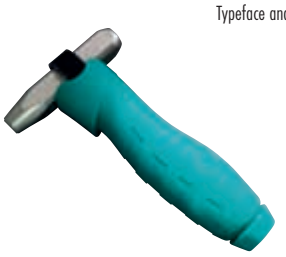
Typeface height mm	Shank quadratic x shank length mm	Numerals 0 - 9 art.no.	€	Letters A - Z, & art.no.	€
2.0	6.3 x 63	**730120** 0020	23,30	**730130** 0020	65,30
3.0	6.3 x 63	730120 0030	24,20	730130 0030	66,90
4.0	9.5 x 70	730120 0040	25,70	730130 0040	72,50
5.0	9.5 x 70	730120 0050	28,30	730130 0050	77,20
6.0	9.5 x 70	730120 0060	31,–	730130 0060	86,50
		7140		7140	

1.0mm	234ABC
1.5mm	234ABC
2.0mm	234ABC
2.5mm	234ABC
3.0mm	234ABC
4.0mm	234ABC
5.0mm	234AB
6.0mm	234A
10.0mm	234

Typeface and font size

Hand-protecting holder

- Ergonomic, allows a comfortable and more secure grip
- More precise work without the risk of finger injury
- Numeral / letter stamp can be attached using the nylon fabric band



Description	art.no.	€
GRIP0004 hand-protecting holder	**730100** 1004	83,50
	7140	

Mini engraving device

- Spindle speed 12,000 rpm^{-1}
- Tool shank 2.35 mm
- Diamond tip 1.0 mm
- For easily engraving various surfaces, e.g. metal, glass, ceramic
- Supplied in a case with engraving tip, 2x AAA batteries, offset screwdriver
- Price per pack

Description	Length mm	Ø mm	Packaging	art.no.	€
Mini engraving device	150	14.00	1	**730003** 0150	39,95
Spare engraving tip	25	2.35	2	730003 0025	8,35
				7135	

ARKOGRAF electric engraver

- Labelling steel and other metals
- Not suitable for anodised parts
- Voltage 230 V, 50/60 Hz
- The electric engraver uses an oscillating electrode, working on the electric arc short circuit principle
- Contents: Special transformer for 1 - 8 V secondary voltage, on/off switch, inspection lamp, approx. 1 m connection cable with Schuko plug, stylus and 3 electrodes in each size (1.2 x 25 mm and 1.5 x 25 mm) for steel and other metals, base plate and wooden box

Electric engraver

Description	art.no.	€
ARKOGRAF electric engraver for steel and metals	**733061** 0001	264,–
	7119	

Accessories

Description	art.no.	€
Spare stylus	**733061** 0101	86,90
Electrodes, 1.2 x 25 mm (10 pieces)	733061 0201	19,10
Electrodes, 1.5 x 25 mm (10 pieces)	733061 0202	19,10
	7119	

SARA® Metal lettering device

- **Permanent lettering on conductive metallic objects**
- With time control and temperature limiter
- For professional black engraving with article designations, symbols and trademarks
- Supplied as a set in a plastic case: Engraving stamp, set of wax templates for self-created labels, contact plate, electrolyte container, engraving device with timer, cable for engraving stamp, bottle of electrolyte for general purposes, bottle of neutralyte, contact plate cable with alligator clip
- **Not suitable for marking digital measuring instruments!**
- Detailed operating instructions are available in the download area on our website: www.sartorius-werkzeuge.de

Description	Output kW	Input	Outlet	art.no.	€
Metal lettering device with timer	30	220 V~ 50/60 Hz	12 V~/AC	**730002** 0001	449,–
				7135	

Accessories

Description	art.no.	€
Electrolyte for general purposes, 500 ml	**730002** 0002	40,75
Electrolyte for non-rusting materials, 500 ml	730002 0003	40,75
Electrolyte for brass, copper and bronze, 500 ml	730002 0004	40,75
Electrolyte for aluminium, 500 ml	730002 0005	40,75
Electrolyte for galvanic surfaces, 500 ml	730002 0006	40,75
Electrolyte for chrome vanadium steels, 500 ml	730002 0007	40,75
Electrolyte for carbide metals, 500 ml	730002 0008	40,75
Neutralyte, 500 ml	730002 0009	23,70
Set of wax templates for self-created labels	730002 0010	35,85
	7135	

LYRA Marking chalk

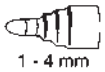
- Yellow
- Hexagonal, sharpened, Ø 11 x 110 mm
- For labelling and marking virtually all materials such as metal, wood, paper, leather, plastic etc.
- Not suitable for extremely smooth surfaces (e.g. glass)
- Permanent, but can be removed using commercially available cleaners

Description	Packaging	Price per pack art.no.	€
Marking chalk, yellow	Box of 12	**742102** 0001	5,35

7135

LYRA Marker pens

- Rounded tip for stroke widths up to 4 mm, length approx. 140 mm
- For marking virtually all materials such as metal, wood, paper, leather, plastic etc.
- Waterproof and smudge-proof



742107 0001

742107 0004

742107 0006

Description	Colour	Packaging	Price per pack art.no.	€
Marker pen	Red	Box of 10	**742107** 0001	12,60
Marker pen	Blue	Box of 10	742107 0004	12,60
Marker pen	Black	Box of 10	742107 0006	12,60

7135

LYRA Deep hole marker

- Slim stainless steel telescopic tip, stroke width 1.5 mm, length approx. 150 mm
- Permanent waterproof ink (can be removed with alcohol or spirits)
- For marking all dry surfaces, including in hard-to-reach areas
- Long cap-off storage time (approx. 1 day)
- Quiver cap with holding clip

742109 0003

742109 0006

Description	Colour	Unit prices art.no.	€
Deep hole marker	Red	**742109** 0003	6,40
Deep hole marker	Black	742109 0006	6,40

7135

LYRA Universal tube marker

- Steel ball valve (ballpoint-pen principle)
- Thick paint, free of halogens, Pb, Cd, Zn, S, Hg#
- Writing width 3 mm
- Temperature-resistant up to +1,000 °C (yellow excluded)
- For labelling and marking all surfaces (including wet, oxidised, rusty, oily, hot, etc.)
- Indelible after a short drying time

Description	Colour	Unit prices art.no.	€
Universal tube marker, 50 ml	White	**742111** 0001	4,29
Universal tube marker, 50 ml	Yellow	742111 0002	4,29
Universal tube marker, 50 ml	Red	742111 0003	4,29
Universal tube marker, 50 ml	Green	742111 0005	4,29
Universal tube marker, 50 ml	Black	742111 0006	4,29
Universal tube marker, 50 ml	Blue	742111 0007	4,29

7135

LYRA Soapstone chalk

- Particularly for heat-resistant labelling on metal (e.g. during welding work)

Description	Packaging	Price per pack art.no.	€
Soapstone chalk, white - 10 x 10 x 100 mm	Box of 10	**742112** 0010	3,49

7135

QUICK-GRIP quick-release clamps

- Quick and versatile
- Can be converted into a spreading clamp in seconds without the need for tools
- Movable and lockable clamping jaws for better pressure distribution
- Clamping pressure: 135 kg / cm^2

Clamp width mm	art.no.	€
150	**740111** 0150	28,90
300	740111 0300	34,–
450	740111 0450	36,90
600	740111 0600	38,60
900	740111 0900	45,90

7122

ATORN® Screw clamps

Torque screw clamp

- Bright-drawn profile rail with grooves on both sides
- Sliding and fixed brackets made from high-quality malleable cast iron
- Movable pressure plate with plastic protective cap

Clamp width mm	Projection mm	art.no.	€
120	65	**740101** 0120	10,80
160	80	740101 0160	12,80
200	100	740101 0200	17,60
250	120	740101 0250	21,80
300	120	740101 0300	26,80
400	120	740101 0400	32,60
500	120	740101 0500	33,–
600	120	740101 0600	35,20
800	120	740101 0800	*39,60*
1,000	120	740101 1000	44,30
1,500	120	740101 1500	51,20
2,000	120	740101 2000	*61,95*

7120

All-steel clamp

- Fixed clamp made from hardened and tempered profile steel
- Sliding clamp made from hardened, tempered and galvanised die-forged steel
- Movable pressure plate

Clamp width mm	Projection mm	art.no.	€
120	60	**740110** 0120	14,40
160	80	740110 0160	17,20
200	100	740110 0200	22,80
250	120	740110 0250	27,80
300	140	740110 0300	34,20
400	120	740110 0400	39,60
500	120	740110 0500	42,60
600	120	740110 0600	44,80

7120

TORNUS All-steel lever clamp

- Fixed clamp made from bright-drawn profile steel, hardened, tempered and high-gloss galvanised
- Sliding clamp die-forged, hardened and tempered

Clamp width mm	Projection mm	Rail mm	art.no.	€
160	80	16 x 7.5	**740116** 0160	46,45
200	100	19.5 x 9.5	740116 0200	*53,10*
250	120	22 x 10.5	740116 0250	61,40
300	140	25 x 12	740116 0300	72,30

7122

Screw clamps

Torque screw clamp

- Structured profile rails
- Sliding and fixed brackets made from high-quality malleable cast iron
- Movable pressure plate with plastic protective cap

Clamp width mm	Projection mm	art.no.	€
120	65	**740103** 0120	16,15
160	80	740103 0160	19,–
200	100	740103 0200	26,20
250	120	740103 0250	31,65
300	140	740103 0300	48,20
400	175	740103 0400	47,40
500	120	740103 0500	48,45
600	120	740103 0600	51,20
800	120	740103 0800	57,45
1,000	120	740103 1000	66,10

7122

All-steel clamp with tiltable handle

- Fixed clamp made from hardened and tempered profile steel
- Sliding clamp made from hardened, tempered and galvanised die-forged steel
- Movable pressure plate

Clamp width mm	Projection mm	art.no.	€
250	120	**740117** 0250	39,25
300	140	740117 0300	47,40
400	120	740117 0400	52,85
600	120	740117 0600	61,75

7122

Universal puller

- **Heavy-duty version**
- With sliding, continuously parallel extractor hooks
- All-purpose use for removing bearings, discs, toothed wheels etc.
- Reversible extractor hooks for external and internal pulling work and infinitely adjustable spans
- Extensions and individual extractor hooks available on request

Two-armed

Model 20-10

model	Clamp width mm	Clamp depth mm	art.no.	€
20-1	90	100	**741002** 2009	65,95
20-10	120	100	741002 2012	71,25
20-2	160	150	741002 2016	123,35
20-20	200	150	741002 2020	135,–
20-3	250	200	741002 2025	225,45

7121

Three-armed

Model 30-10

model	Clamp width mm	Clamp depth mm	art.no.	€
30-1	90	100	**741006** 3009	94,65
30-10	120	100	741006 3012	101,25
30-2	160	150	741006 3016	176,10
30-20	200	150	741006 3020	198,10
30-3	250	200	741006 3025	371,75

7121

Pressure screw

model	Thread	Thread length mm	suitable for model	art.no.	€
614135	M14 x 1.5	135	20-1, 20-10, 30-1, 30-10	**741008** 0001	25,85
621210	G 1/2"	210	20-2, 20-20, 30-2, 30-20	741008 0002	33,05
626280	G 3/4"	280	20-3, 20-30, 30-3	741008 0003	77,45
633350	G 1"	350	20-4, 20-40, 30-3, 11-0, 11-1, 11-2	741008 0004	129,05
637600	R 1/2"	600	20-5, 18-5	741008 0005	227,10

7121

Puller

- **With levered, self-centring extractor hooks**
- Extremely handy design
- Patented joint span adjustment
- The greater the pulling pressure, the stronger the grip

Two-armed

model	Clamp width mm	Clamp depth mm	art.no.	€
43-1	60	50	**741010** 4301	34,–
43-2	70	70	741010 4302	34,80
43-3	80	80	741010 4303	35,65
44-1	100	100	741010 4401	40,30
44-2	120	120	741010 4402	63,10
44-3	160	160	741010 4403	97,65
44-4	250	185	741010 4404	135,45
44-5	300	250	741010 4405	178,05
44-6	375	275	741010 4406	285,50

7121

Three-armed

model	Clamp width mm	Clamp depth mm	art.no.	€
43-11	60	50	**741011** 4311	42,95
43-12	70	70	741011 4312	43,60
43-13	80	80	741011 4313	46,35
45-1	100	100	741011 4501	61,10
45-2	120	120	741011 4502	91,25
45-3	160	160	741011 4503	136,35
45-4	250	185	741011 4504	192,60
45-5	300	250	741011 4505	239,75
45-6	375	275	741011 4506	417,10
45-7	600	350	741011 4507	576,–

7121

Universal ball-bearing extractor

- **Internal puller**
- For extracting ball bearings, ball-bearing outer races and bushes
- Even bearings lying very close to the rear wall are
- reliably gripped and quickly removed thanks to the excellent clamping force

Internal puller

model	for bore hole Ø mm	suitable for model	art.no.	€
21-0	5-8	22-1	**741012** 0001	47,90
21-00	6-10	22-1	741012 0002	47,90
21-01	8-12	22-1	741012 0003	47,90
21-02	10-14	22-1	741012 0004	47,90
21-1	12-16	22-1	741012 0005	47,90
21-2	14-19	22-1, 22-2	741012 0006	47,90
21-3	18-23	22-1, 22-2	741012 0007	47,90
21-4	20-30	22-1, 22-2	741012 0008	52,85
21-5	28-40	22-1, 22-2	741012 0009	59,45
21-6	36-46	22-2, 22-3	741012 0010	66,10
21-7	45-58	22-2, 22-3	741012 0011	89,10
21-8	56-70	22-2, 22-3	741012 0012	112,30
21-89	56-110	22-4	741012 0014	257,50
21-9	70-100	22-3	741012 0013	178,25
21-90	100-200	22-5	741012 0015	336,70

7121

Counter stay, two-armed

model	suitable for model	art.no.	€
22-1	21-0 to 21-5	**741013** 2201	*53,60*
22-2	21-3 to 21-8	741013 2202	*69,15*
22-3	21-6 to 21-9	741013 2203	*146,70*
22-4	21-89	741013 2204	*176,10*
22-5	21-90	741013 2205	*198,10*

7121

Model 22-2

Set

- Practical set in a plastic box

model	Contents	art.no.	€
25-A	Internal puller: 21-1 to 21-6 / counter stays: 22-1, 22-2	**741014** 2501	*489,85*
25-B	Internal puller: 21-1 to 21-8 / counter stays: 22-1, 22-2	741014 2502	*697,40*
25-C	Internal puller: 21-1 to 21-7, 21-89 / counter stays: 22-1, 22-2, 22-4	741014 2503	*1.020,55*

7121

Screw extractor

American version (wide grooves)

Type	for screws	Twist drill Ø mm	art.no.	€
49-01	3 - 6	1.8	**742041** 0306	7,65
49-02	6 - 8	3.0	742041 0608	9,40
49-03	8 - 11	4.0	742041 0811	9,40
49-04	11 - 14	6.0	742041 1114	11,15
49-05	15 - 18	8.0	742041 1418	*11,70*
49-06	18 - 24	12.0	742041 1824	*14,15*

7122

Set

model	Description	art.no.	€
49-0-S	Set of 6 extractors	**742041** 0324	64,10

7122

CV steel, 6 pieces, finely grooved

- In a plastic box, for extracting screws, range: M4 - M24

Description	art.no.	€
M4 / M5 - M7 / M8 - M11 / M12 / M16 - M20 / M24	**742040** 0324	15,25

7122

Screw extractor set, 25 pieces

- Screw extractor, HSS twist drill bit, drill bit guide bushes

Type	for screws	art.no.	€
49-U-B	M5 - M16	**742044** 0516	116,55

7122

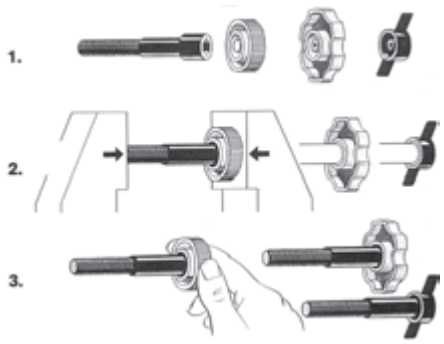
Solid carbide extractors

Page 10-172

Knurled screw heads

DIN 912

- Compatible with hexagonal socket head screws according to DIN 912
- Press-on application to attach the special screw heads to the hexagonal socket head screws.
- Thread dimension engraved on the inside of the screw head



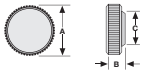
Boxed sets

Contents	art.no.	€
Knurled screw heads, 25 of each: M3, M4, M5, M6 (19), M6 (26), M8; colours: red, black and grey	**760101** 1001	264,–
Star grip screw heads, 25 of each: M6, M8, M10; colours: black and grey	760101 2001	206,–

7152

Knurled screw heads

Price per pack of 100

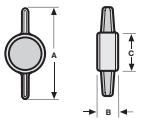


for thread	Colour	A mm	B mm	C mm	art.no.	€
M3	Red	9.5	4.5	8.3	**760110** 1003	39,50
M3	Black	9.5	4.5	8.3	760110 1103	39,50
M3	Grey	9.5	4.5	8.3	760110 1203	39,50
M4	Red	13	5.5	9.8	760110 1004	40,50
M4	Black	13	5.5	9.8	760110 1104	40,50
M4	Grey	13	5.5	9.8	760110 1204	40,50
M5	Red	16	6.5	11.5	760110 1005	45,50
M5	Black	16	6.5	11.5	760110 1105	45,50
M5	Grey	16	6.5	11.5	760110 1205	45,50
M6	Red	19	7.5	13	760110 1006	48,50
M6	Black	19	7.5	13	760110 1106	48,50
M6	Grey	19	7.5	13	760110 1206	48,50
M6	Red	26	7.8	13	760110 1016	70,–
M6	Black	26	7.8	13	760110 1116	70,–
M8	Red	26	9.8	16	760110 1008	70,50
M8	Black	26	9.8	16	760110 1108	70,50
M8	Grey	26	9.8	16	760110 1208	70,50

7152

Wing screw heads

Price per pack of 100

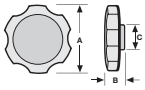


for thread	Colour	A mm	B mm	C mm	art.no.	€
M5	Black	26	6.6	12	**760120** 3105	47,50
M6	Black	30	7.8	13.5	760120 3106	50,50
M8	Black	38	10	16.5	760120 3108	60,50
M10	Black	45	12.5	20	760120 3110	65,50

7152

Star grip screw heads

Price per pack of 100



for thread	Colour	A mm	B mm	C mm	art.no.	€
M6	Black	38	9.7	13	**760130** 2106	111,50
M8	Black	38	10	16	760130 2108	112,50
M10	Black	38	12.5	19.5	760130 2110	115,–

7152

WD-40 multifunctional spray

- **Rust dissolver**
- **Lubricant**
- **Contact spray**
- **Corrosion protection**
- **Cleaner**
- **Silicone and resin-free**

It penetrates layers of rust, loosens jammed mechanisms and seized-up vehicle or machine parts. It removes stubborn dirt, repels moisture from electrical contacts and prevents current leakage. WD-40 leaves behind a thin protective film that prevents the accumulation of moisture and formation of rust on metal parts.

- **Also available with a practical "SmartStraw" twin spray system or with a spray head for use on large surfaces**

742045 0001 742045 5000

742045 0300 742045 0400 742045 0500

Description	art.no.	€
"Smart Straw" spray can, 300 ml	**742045** 0300	6,65
Spray can, 400 ml	742045 0400	7,15
"Smart Straw" spray can, 500 ml	742045 0500	9,65
"Smart Straw" spray can set, 500 ml, 24 cans	742045 0524	222,50
Atomiser, holds 500 ml, empty	742045 0001	6,95
5 l canister	742045 5000	39,95
	7138	

Description	art.no.	€
Specialist universal spray can	**742046** 0001	10,45
Specialist rust dissolver spray can	742046 0002	10,95
	7138	

742046 0001 742046 0002

Marking fluid

Marking fluid

- For marking metal surfaces
- Easy to remove
- Quick-drying and good adhesion
- Non-reflective

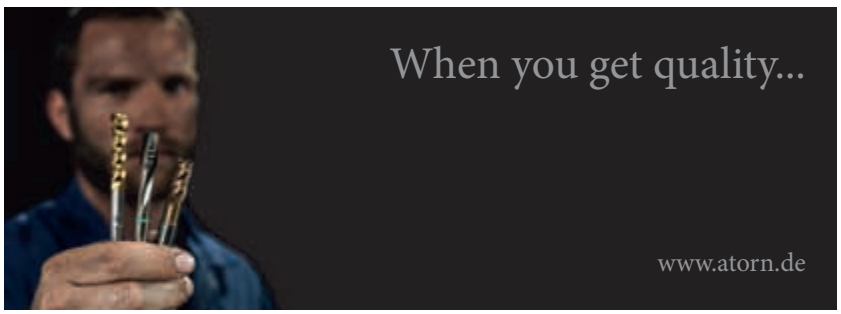
Contents ml	Colour	Design	art.no.	€
300	Blue	Spray	**742120** 1300	12,50
500	Blue	Bottle	742121 1500	14,10
500	Red	Bottle	742121 2500	13,90
			7135	

742120 1300 742121 1500 742121 2500

Solvent

- For general cleaning, particularly the removal of marking ink

Inhalt ml	Design	art.no.	€
300	Spray	**742122** 0300	9,35
		7135	



...then it's ATORN.

ATORN®
High quality for great performance

Engineer's blue

Engineer's blue
- For surface testing
- The evenness of the colour layer indicates the quality of the finish

Contents	Colour	Design	art.no.	€
60 g	Blue	Tube	**742123** 0060	7,30
225 g	Blue	Can	742123 0225	12,99
			7135	

742123 0060

742123 0225

High-performance cleaner
- Suitable for removing engineer's blue

Contents ml	Design	art.no.	€
1,000	Bottle	**742124** 1000	8,95
		7135	

ARIANA High-performance cutting fluid concentrate

- Water-soluble, **chlorine-free**
- For universal applications, with high additivation
- High level of corrosion protection even at residual concentration
- Particularly suitable for NC and CNC centres
- Application concentration 3 - 7 %
- pH value at 5 % concentration approx. 9.4
- Refractive index 1.1 (scale value = concentration)
- Also available in 60 litre and 204 litre containers on request

Description	Contents l	art.no.	€
Canister	10	**742036** 1000	95,45
Canister	25	742036 2000	226,95
		7138	

ARIANA High-performance cutting oil

- **Chlorine and silicone-free**, a non-water-soluble heavy-duty cutting oil
- Universal cutting oil for all materials
- Massive increase in tool endurance
- Ideal for high-alloy steel grades, optimum workpiece surfaces
- Also for turning, milling, reaming, thread cutting, broaching, sawing, etc.
- Gentle on the skin and environmentally friendly, low volatility
- Applied with a squeeze bottle, sprayer or lubricating device
- Can also be used for minimum-volume lubrication

742037 0300

742037 0500

742037 5000

Description	Contents l	art.no.	€
Atomiser	0.3	**742037** 0300	9,40
Wash bottle	0.5	742037 0500	16,95
Canister	5.0	742037 5000	99,50
		7138	

ARIANA Thread cutting paste

- **Chlorine-free**
- Specifically for cutting threads in steel, chrome or nickel alloys, titanium, manganese, cast steel, grey cast iron and malleable cast iron
- Adheres to the cutting edge and becomes liquid when used
- High-pressure additives enable high pressure absorption
- Flash point above 200 °C

742038 0300

742038 0750

Contents g	art.no.	€
300	**742038** 0300	17,80
750	742038 0750	21,–
	7138	

ARIANA Thread cutting agent

- Water/soap-based paste
- Ideally suited to thread cutting, thread drilling, centring, broaching and milling
- Latest generation multi-purpose lubricant, applied directly from the squeeze bottle onto the metal surface to be treated, significantly increases tool life
- Semi-paste grease
- Ideal for all metals, including stainless steel
- **Free from petroleum, chlorine and sulphur**
- Light blue, odour-free, flash point > 225 °C, melting point 32 °C

Contents ml	art.no.	€
250	**742043** 0250	10,25
500	742043 0500	18,50
1,000	742043 1000	27,70
5,000	742043 5000	114,50
	7138	

ARIANA Filling level display

- For commercially available 60 and 210 l containers
- For non-corrosive fluids such as cutting fluid concentrates, emulsions, oils, antifreeze, heating oil etc. as well as liquid media
- Permanent volume display
- Fitted on 3/4" opening, leaving 2" bung opening free

Description	art.no.	€
Filling level display	**742039** 0001	73,40
	7138	

WEICON Adhesives

"Repair Stick Steel" two-component putty resin

- Easily portioned; trim – knead – finish
- Temperature-resistant from -50 °C to +120 °C
- Adheres to metal, many hard plastics, composite fibre materials, glass, ceramic and stone
- Resistant to oils, most alkaline solutions and dilute acids
- Solvent-free
- Can be mechanically finished and painted once hardened
- Additional versions (e.g. "Aluminium", "Copper", "Titanium") available on request

Contents g	art.no.	€
115	**742050** 0115	15,60
	7138	

Epoxy minute adhesive

- Transparent adhesive, hardens to a residual level of elasticity
- Ideal for design and assembly applications
- Viscous, self-levelling, extremely short pot life (3 - 4 minutes)
- Rapid hardening, almost clear, slightly yellowish
- Twin spray

Contents ml	art.no.	€
24	**742051** 0024	9,80
	7138	

"Fast-Metal" minute adhesive with metallic content

- High viscosity (paste-like), gap-filling, extremely short pot life (3 - 4 minutes), rapid hardening
- Ideal for repairs that involve bridging larger tolerances
- Machinable (grinding, filing, drilling etc.)
- Anthracite colour
- Twin sprays

Contents ml	art.no.	€
24	**742052** 0024	11,90
	7138	

VA 1401 super-fast contact cyanoacrylate adhesive

- Medium viscosity, 100 - 150 mPa.s
- Rapid hardening
- Universal type for bonding metal, plastic and rubber
- Can also be used on fabric, paper and cardboard as well as foam rubber and large-pored elastomers
- Pen system
- Additional versions available on request

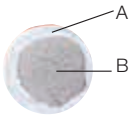
Contents g	art.no.	€
30	**742053** 0030	17,50
	7138	

PIG® *repair putty*

- **Bonds like a two-part epoxy resin putty, without oiliness**
- PIG® Repair Putty cements everything – iron, glass, brickwork and most plastics
- Part A and part B of the prepared epoxy system are in the same tube – simply knead the putty and apply
- Solid in 20 minutes, harder than cement after one hour
- Solvent-free, contains no VOC
- Can be stored unopened for at least two years (at 20 - 25 °C, protect against direct sunlight)
- **Unit prices (graduated)**

Can be used everywhere for quick, effortless repairs:

- Sealing leaks in steel drums
- Repairing holes and cracks in pipes
- Mending leaks on steel and fibreglass tanks
- Restoring or re-cutting threads
- Sealing cracks in casings
- Filling and smoothing holes and hollows in floors
- Repairing steam conduits and radiators
- Sealing leaky connections
- Filling nail holes in walls
- Repairing faulty toilets
- Closing multiple cavities during injection moulding
- Reinforcing cast steel moulds
- Sealing holes in castings during production
- Making temporary repairs to heating ducts
- Repairing transformers, porcelain bushings and reclosers
- Patching aluminium containers during the production process
- Creating models, holding devices and prototypes
- Carrying out preliminary tube repairs to large vacuum cleaning systems, and much more.



Length mm	art.no.	€
180	**742070** 0001	12,25
	9204	

Sealants

Black Seal special silicone, black

- Special type, especially suitable for use in mechanical, motor and automotive engineering
- Particularly resistant to grease, oil and similar fluids
- Provides extremely high leak protection for motors and water pumps, gearboxes and axles, oil sumps etc.
- Temperature-resistant from -60 °C to +280 °C (short-term to +300 °C)

Contents ml	art.no.	€
85	**742054** 0001	9,80
	7138	

Flex+bond

- Diverse applications and extremely high adhesive strength (adhesion)
- Bonds virtually all metals, wood, plastics, glass, ceramics etc.
- Single-component, permanently elastic, can be painted over "wet-on-wet", can be sanded after hardening
- Temperature-resistant from -40 °C to +90 °C, short-term (2 - 3 hrs.) up to +130 °C
- Weather-proof, UV-stable, resistant to seawater
- Free from silicone, halogen and PVC

742055 0001

742055 0002

Colour	Contents ml	art.no.	€
White	85	**742055** 0001	11,90
Transparent	85	742055 0002	11,90
		7138	

WEICONLOCK screw lock

- Type AN 302-43, universal type, screw lock, NVGW and KTW-tested, higher viscosity, medium strength, average to remove
- WEICONLOCK AN 302-70, screw and stud bolt lock, medium viscosity, high-strength, difficult to remove
- Pen system

742056 0001

742056 0002

Type	Contents ml	art.no.	€
AN 302-43, medium-strength	50	**742056** 0001	24,95
AN 302-70, high-strength	50	742056 0002	24,95
		7138	

- **Aluminium spray, stainless steel care spray and rust-shock spray available on request**

Zinc spray, "special bright"

- Quick-drying, long-lasting corrosion protection for all metals
- Provides lasting cathodic corrosion protection for all metallic surfaces, e.g. hot-galvanised parts that require reworking
- Used as a high-quality anti-corrosion primer, e.g. for painting vehicle bodies, for coating weld and drilling locations, as a conductive intermediate layer during spot welding
- For repairing damaged galvanised surfaces, colour shade matches hot-galvanising

Contents ml	art.no.	€
400	**742057** 0400	13,95
	7138	

"Multi-Foam" foam cleaner

- For universal applications
- Cleans all glass, metal and plastic parts or painted surfaces without leaving residue
- Thoroughly eliminates insects, smears and dirt films
- Environmentally friendly, biodegradable
- Phosphate and formaldehyde-free, no corrosive or caustic additives

Contents ml	art.no.	€
400	**742062** 0400	6,40
	7138	

Sealant and adhesive remover

- Dissolves and removes sealant and hardened adhesive residue as well as paints and dyes
- Dissolves all types of sealant residue on cylinder heads, oil sumps, water pumps and exhaust manifolds, valve covers and gearbox flanges
- Removes carbon deposits, dye and paint, oil, resin, grease and tar
- Removes all types of adhesive, even hardened cyanoacrylate and anaerobic adhesives
- Can be used on metal, wood, glass, ceramic, polyethylene and polypropylene
- Not for use on delicate plastics such as PVC, synthetics, linoleum etc.

Contents ml	art.no.	€
400	**742063** 0400	9,80
	7138	

Spray cleaner

- Degreases and cleans all metals, glass, ceramic and many types of plastic
- Removes even gummy lubricants when cleaning machine parts
- Used as a pre-treatment for priming and painting
- Evaporates quickly and leaves no residue
- Does not leave a residual layer, unlike thinners
- Can soften thermoplastics such as PVC, Plexiglas, polystyrene and simple paint coatings
- Compatible with all Weicon adhesives and sealants

Contents ml	art.no.	€
500	**742064** 0500	7,75
	7138	

PTFE spray

- Grease-free dry lubricant with PTFE-based non-stick effect (polytetrafluoroethylene)
- Adheres to all metal, plastic and wooden surfaces
- Resistant to dirt and dust, water-repellent and resistant to oil, grease and numerous chemicals
- Temperature-resistant from -180 °C to +250 °C
- Used wherever oil or grease lubrication is not permissible or desirable

Contents ml	art.no.	€
400	**742065** 0400	14,40
	7138	

Universal grease spray with MoS2

- Strongly adhesive and high-pressure-resistant long-term grease with MoS2
- Suitable for roller and plain bearings, joints, levers, bearing guides, spindles, camshafts and spline shafts, springs (e.g. leaf springs), open gears (e.g. ring gears), worm gears at all rubbing velocities permissible for grease lubrication
- Temperature range: -20 °C to +120 °C

Contents ml	art.no.	€
400	**742066** 0400	10,85
	7138	

Welding protection spray

- Silicone-free, for cleaning and preserving the cleanliness of welding nozzles
- Simultaneously protects the workpiece to be welded against splashes without impairing the weld seam
- Prevents weld spatter from sticking to gas nozzles and workpiece surfaces
- No need for subsequent workpiece cleaning with spatulas, brushes or chisels
- Treatments such as burnishing, galvanising, anodising or painting can be performed on workpieces afterwards without special cleaning. Some cleaning may be necessary in the event of heavy spraying

Contents ml	art.no.	€
400	**742067** 0400	6,50
	7138	

Stainless steel spray

- Corrosion-proof and weather-resistant surface coating
- Can be used anywhere a hard-wearing and effective protective coating is required thanks to the high degree of chemical stability
- Alloy components include chrome, nickel and manganese
- Touch-dry in approx. 10 minutes; fully adhered and wear-resistant after 4 - 6 hours, as well as temperature resistant to +300 °C for short periods

Contents	art.no.	€
400	**742059** 0400	17,50
	7138	

Oil cans and industrial oilers

Plastic, resilient

- Made from polyethylene
- Removable brass spray pipe, sealed with a screw cap at the tip

Filling quantity max. ml	art.no.	€
250	**742001** 0250	3,05
500	742001 0500	3,35
	7125	

Metal spray oiler

- Brass pump
- Rigid and flexible metal spray pipes

Filling quantity max. ml	art.no.	€
200	**742005** 0200	15,95
300	742005 0300	17,20
500	742005 0500	18,50
	7125	

Industrial atomiser

- Plastic, PE
- Transparent
- Spray head with closable nozzle
- Not suitable for acetone, glycone, ammonia, brake cleaners or acids

742008 0750

742008 2000

Description	Contents l	art.no.	€
Pump atomiser with plastic nozzle	0.75	**742008** 0750	7,40
Spray pipe with brass nozzle, manual pressure build-up	2	742008 2000	30,50
		7125	

Combination funnel

- Tin plate
- Plastic outlet and removable brass sieve
- Flexible metal hose (300 mm)

Ø mm	Contents l	art.no.	€
160	1.3	**742009** 0160	21,95
200	3.2	742009 0200	27,10
		7125	

Funnel set, 6 pieces

- Plastic, PE
- 50 to 150 mm with holding tab
- 160 mm with removable brass sieve and handle

Ø mm	art.no.	€
50, 75, 100, 120, 150, 160	**742010** 0006	13,95
	7125	

Hand lever-operated grease gun

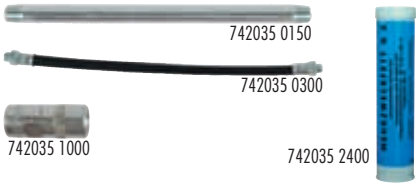
- Made from steel
- Safety handle
- Connection thread M10 x 1

742030 1000

742030 0001

Description	art.no.	€
Hand lever-operated grease gun, without grease cartridge	**742030** 0001	15,20
Hand lever-operated grease gun set with case, incl. accessories	742030 1000	139,–
	7125	

Accessories



742035 0150

742035 0300

742035 1000

742035 2400

Description	art.no.	€
Nozzle pipe, 150 mm, straight	**742035** 0150	1,85
Reinforced hose, 300 mm	742035 0300	7,50
Hydraulic mouthpiece	742035 1000	3,05
Grease cartridge, 400 g	742035 2400	5,15
	7125	

Measuring jug

- **Can be officially calibrated**
- Tin plate
- Embossed with the words "For mineral oils only"
- Scale
- Plastic outlet

Contents	art.no.	€
1	**742006** 0001	11,60
2	742006 0002	16,95
	7125	

Storage can

- Steel sheet, galvanised

Contents	art.no.	€
5	**742012** 0005	42,95
10	742012 0006	47,35
	7125	

Multi-purpose pump

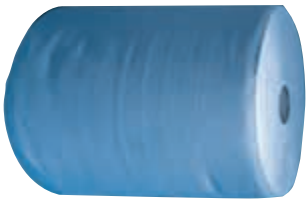
- Handy pump for diesel, heating oil, hydraulic oil and motor oil
- For 200 l barrels
- 1 m plastic hose with outlet nozzle
- Intake pipe
- Flow rate 0.4 l/stroke

Description	art.no.	€
Multi-purpose pump (lever-operated cylinder pump), 0.4 l/stroke	**742004** 0001	98,50
	7125	

Paper tissue rolls and cleaning cloths

- Unit prices when purchased in packs

Even more handy and absorbent



Multiclean® paper tissue rolls

- Suitable for industry and trade use (e.g. machine maintenance)

Description	Dimensions	Length m	Contents	D mm		art.no.	€
2-ply	36 x 36 cm	360	Approx. 1,000 sheets per roll	290	2	**720596** 0004	24,60
3-ply	38 x 22 cm	380	Approx. 1,000 sheets per roll	370	1	720596 0003	25,95
3-ply	36 x 36 cm	360	Approx. 1,000 sheets per roll	375	1	720596 0005	34,85
						7138	

Multiclean® plus paper tissue rolls

- Very good grip, high-volume and even more absorbent

Description	Dimensions	Length m	Contents	D mm		art.no.	€
3-ply	36 x 36 cm	180	Approx. 500 sheets per roll	275	2	**720592** 0004	21,95
						7138	

Floor stand with refuse sack holder (supplied without paper tissue roll)

Description	Width cm	art.no.	€
Without paper tissue roll and refuse bag	42	**720593** 0002	78,–
With 36 x 36 cm paper tissue roll (360 m, 3-ply) and 120 l refuse bag	42	720593 0010	109,95
		7138	

Wall-mounted holder with refuse sack holder (supplied without paper tissue roll)

Width cm	art.no.	€
42	**720594** 0002	51,70
	7138	

Refuse sack

Volumes l	Contents	Colour	art.no.	€
120	1 roll of 15 bags	Blue	**720598** 0001	5,95
			7138	

WiperBowl® *Polytex*® cleaning cloths

- High cloth quality for individual use; double-sided, soft and abrasive
- Lifts dirt deposits including heavy grease, lubricant, adhesive, oil, tar and carbon.
- Suitable for almost all materials and surfaces in industrial and trade fields, for vehicle care as well as cleaning machine controls, computer keyboards, telephone receivers and even sensitive surfaces
- Particularly skin-friendly thanks to gentle cleaning substances with a pleasant, fresh orange scent
- Perforated sheets make cloths easy to remove

Description	Contents	art.no.	€
Cleaning cloths in dispenser bucket	72 sheets	**720597** 0001	18,95
		7138	

BASE tool case

- Strong all-purpose case!
- Made from high-impact ABS with a new, modern design
- A robust aluminium frame with abutting edge protection prevents damage to tools and the case
- 2 lockable flip catches and a combination lock for security
- 4 additional feet help the case to stand and prevent scratching to the shell
- A sturdy, comfortable handle makes the case easy to carry
- Adjustable bottom tray arrangement thanks to aluminium dividers
- A4 document compartment
- Hinge covering and safety lid holder
- Supplied without tools
- ***BASE POCKETS*** model:
- Removable tool board in the lid with 22 tool pockets on the front and back
- Cover panel for bottom tray with 15 tool pockets
- ***BASE MODUL*** model:
- Removable tool board in the lid with 3 modular tool holders on each side, front and back
- Cover panel for bottom tray with 3 modular tool holders

743011 0001

743011 0002

model	Interior dimensions mm	Supported load max. kg	Volumes l	Weight kg	art.no.	€
BASE POCKETS	460 x 355 x 170	25	26	4.6	**743011** 0001	120,–
BASE MODUL	460 x 355 x 170	25	26	4.6	743011 0002	144,50

7126

GO tool case

- Easy to handle, with a vast carrying capacity and modern design. Always to hand!
- Mobile tool case made from ABS with user-friendly telescopic handle and 2 inline wheels
- A robust aluminium frame with abutting edge protection prevents damage to tools and the case
- 2 lockable flip catches and a combination lock for security
- 4 additional feet help the case to stand and prevent scratching to the shell
- A sturdy, comfortable handle makes the case easy to carry
- Adjustable bottom tray arrangement thanks to new aluminium dividers
- A4 document compartment
- Hinge covering and safety lid holder
- **Model*GO POCKETS***:
- Removable tool board in the lid with 22 tool pockets on the front and back
- Cover panel for bottom tray with 15 tool pockets
- ***GO MODUL*** model:
- Removable tool board in the lid with 3 modular tool holders on each side, front and back
- Cover panel for bottom tray with 3 modular tool holders

743012 0002

743012 0001

model	Interior dimensions mm	Supported load max. kg	Volumes l	Weight kg	art.no.	€
GO POCKETS	485 x 375 x 200	30	36	6.6	**743012** 0001	199,50
GO MODUL	485 x 375 x 200	30	36	6.6	743012 0002	219,–

7126

Gamma tool bag

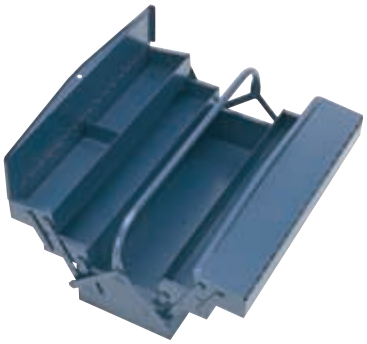
- High-quality pilot's case, with central divider
- Synthetic leather, black
- Sides made from ABS, black
- Front can be folded up
- 11 tool holding straps on the rear panel
- 10 tool pockets in the front
- Removable central divider with a total of 24 tool holding straps
- 2 combination locks
- Supplied without tools

model	Interior dimensions mm	Weight kg	art.no.	€
Gamma	430 x 320 x 190	2.8	**743015** 0001	76,95

7126

ATORN® Tool box

- **Sheet steel**
- Robust workshop version
- Painted blue (powder coating)
- Sheet thickness 0.6 - 0.7 mm



Design	Dimensions L x W x H mm	Weight kg	art.no.	€
3 pieces	430 x 200 x 150	3.4	**743030** 0429	20,80
5 pieces	430 x 200 x 200	4.4	743030 0430	25,20
5 pieces	530 x 200 x 200	5.0	743030 0530	29,–
5 pieces	600 x 200 x 200	5.6	743030 0600	34,–

7126

ATORN® Tool boxes and roller cases

- ABS plastic, black
- Solid aluminium frame, floor sliders, ratchet hinges
- Flip-catch cylinder locks
- Con-Pearl tool boards
- Supplied without tools

743016 0002

743016 0001

Tool case

- **7430160001:**
  1x tool board with 25 push-in compartments, 1x 400 mm clip compartment, 1x tool board with 10 push-in compartments,
  1x cover panel with 15 push-in compartments and a clip compartment, bottom tray with cover plate, freely dividable
- **7430160002:**
  1x tool board with 25 push-in compartments, 1x 400 mm clip compartment,
  1x cover panel with 15 push-in compartments and a clip compartment, bottom tray with cover plate, freely dividable

Description	L mm	B mm	H mm	art.no.	€
Tool case	460	165	310	**743016** 0001	198,–
Tool case	470	180	360	743016 0002	189,–

7126

743016 0003

Roller case

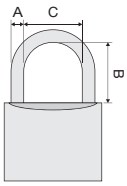
- **7430160003:**
  4-way telescopic extension, 1050 mm long; large castors; wide wheelbase; easy to pull and push; extremely stable
  1x tool board with 25 push-in compartments and 1x 400 mm clip compartment,
  1x cover panel with 15 push-in compartments and 1x 400 mm clip compartment,
  interior shell can be freely divided

Description	L mm	B mm	H mm	art.no.	€
Roller case	470	190	360	**743016** 0003	279,–

7126

Padlocks

- Solid lock body made from TITALIUM™ special aluminium
- Approx. 30 % less weight than brass with the same level of safety
- Special steel shackle with NANO-Protect™ coating for extremely high corrosion protection
- Double locking shackle, incl. two cylinder keys



Width mm	A mm	B mm	C mm	art.no.	€
30	5	17	16	**743046** 0030	5,40
40	6.5	23	22	743046 0040	7,80
50	8	29	29	743046 0050	11,10

7114

Combination lock

- Brass lock body
- Steel shackle
- 20 and 30 mm: individually resettable 3-digit code
- 40 mm: individually resettable 4-digit code
- Spring-loaded shackle to facilitate combination setting
- Suitable for locking bags, cases, (strong)boxes, cabinets, lockers, toolboxes, basement windows, switchgears, etc.

Width mm	A mm	B mm	C mm	art.no.	€
20	3.5	21.5	9	**743047** 0020	9,90
30	5	25	14	743047 0030	10,95
40	6	26	21.5	743047 0040	16,95

7114

743047 0040

VARTA Batteries

- High-quality branded long-life alkaline batteries
- Prices per pack

Batteries

Designation	Tension V	Type	Contents	art.no.	€
LR03, Micro, AAA	1.5	Alkaline / high-energy	Pack of 4	**548079** 4003	5,99
LR6, Mignon, AA	1.5	Alkaline / high-energy	Pack of 4	548079 4006	5,99
LR14, Baby	1.5	Alkaline / high-energy	Pack of 2	548079 4014	5,99
LR20, Mono, D	1.5	Alkaline / high-energy	Pack of 2	548079 4020	5,99
6LR61, 9 Volt	9.0	Alkaline / high-energy	1 piece per pack	548079 4022	5,99
				5125	

Longlife / Power rechargeable batteries

Designation	Tension V	Type	Contents	art.no.	€
LR3, Micro rechargeable, AAA	1.2	Longlife rechargeable	Pack of 2	**548079** 7001	7,49
LR3, Mignon rechargeable, AA	1.2	Longlife rechargeable	Pack of 2	548079 7002	7,49
LR14, Baby rechargeable, C	1.2	Power rechargeable	Pack of 2	548079 7103	14,99
LR20, Mono rechargeable, D	1.2	Power rechargeable	Pack of 2	548079 7104	14,99
6LR61, 9 Volt rechargeable, E	8.4	Power rechargeable	1 piece per pack	548079 7105	12,99
				5125	

Universal charger

Description	art.no.	€
Universal charger for AAA, AA, C, D and E	**548080** 1000	24,80
	5125	

Button batteries / special batteries

Designation	Tension V	Type	Contents	art.no.	€
13ZL button battery	1.4	Zinc-air	Pack of 6	**548079** 4606	7,99
10GA button battery	1.5	Alkaline / high-energy	1 piece per pack	548079 4706	3,29
CR2032 button battery	3.0	Lithium	1 piece per pack	548079 6032	4,99
CR2450 button battery	3.0	Lithium	1 piece per pack	548079 6450	4,99
SR44 (357) button battery	1.55	Silver oxide	1 piece per pack	500534 0001	4,20
23A	12	Alkaline / electronic	1 piece per pack	548079 4223	4,99
LR1, Lady	1.5	Alkaline / electronic	1 piece per pack	548079 4001	2,09
CR123A	3.0	Lithium	1 piece per pack	548079 6205	7,29
				5125	

LED torch

- Rubber torch with non-slip handle
- Splash-proof and shock-proof
- **Supplied without batteries** (weight excludes batteries)

Light source	Description	Length mm	Weight g	art.no.	€
1 W	90 m lighting range, 3 - 4 hrs. light-on time, excl. 2x Mignon batteries (AA)	179	152	**770111** 0001	12,50
3 W	120 m lighting range, 7 hrs. light-on time, excl. 2 Mono batteries (D)	218	252	770111 0003	16,30
				7150	

MAG-LITE® Torches

- Extremely high luminosity
- Extremely robust
- Sophisticated design
- The genuine article from the USA
- Made from high-strength aluminium, black
- Splash-proof thanks to o-rings, max. corrosion protection

770103 0001

model	Light source	Length mm	Description	art.no.	€
Mini Mag AAA	White/halogen	129	In a gift case; includes 2 Micro batteries (AAA)	**770103** 0001	33,80
Mini Mag AA	White/halogen	146	In a gift case; includes 2 Mignon batteries (AA)	770103 0002	36,95
Maglite 2D	White/krypton	254	Takes 2 size D batteries (sold separately); 1 spare light bulb included	770103 0003	67,50
Maglite 3D	White/krypton	313	Takes 3 size D batteries (sold separately); 1 spare light bulb included	770103 0004	66,50
				7150	

770103 0002

MAG-LITE® LED torches

- LED - 3 Watt
- LED service life = 10,000 hrs.
- Colour: black

770103 0007

770103 0006

770103 0006

770103 0007

Designation	Light source	Length mm	Description	art.no.	€
Mini Maglite LED	LED	170	With belt holder, incl. 2 batteries (AA)	**770103** 0007	77,65
Maglite 2D LED	LED	250	Takes 2 size D batteries (sold separately)	770103 0006	110,95

7150

ATORN® Battery-powered hand-held LED lamp

IP 54

- High-performance flat LED for even lighting
- Extremely robust full rubber casing
- Soft-touch switch and foldable, break-resistant hook
- Integrated charge indicator
- Luminosity: 500 Lux at a distance of 1 m
- Lithium-ion battery, 3.7 V / 2,200 mAh
- Supplied with PSU

Length mm	Light source	art.no.	€
280	2.5 W	**774003** 0001	128,–

7151

HEDI Kompakt battery-powered hand-held LED lamp

- Practical, shock-proof battery-powered hand-held lamp, rubber casing
- For flexible workshop and warehouse use during installation work or repairs
- Small size, ideal for trouser and jacket pockets
- 28 white LEDs for bright and focussed light
- Magnetic clamp and a folding, rotatable plastic hook for hanging
- Replaceable battery (4.0 hrs. without recharging)
- Shock-proof casing
- On/off switch
- Supplied with battery, 250 V charger, operating manual

Length mm	Width mm	Depth mm	Weight kg	art.no.	€
250	50	50	0.305	**774002** 0001	42,95

7157

ATORN® LED machine and workplace lamp

IP 40

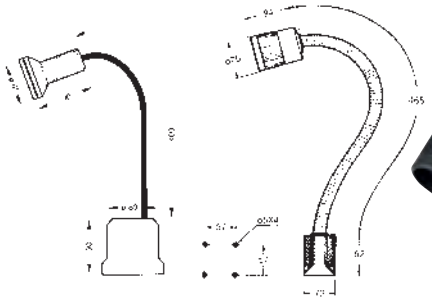
- Infinitely variable focus, spotlight or broad-beam
- Lamp head and base made from shock-proof non-flammable plastic
- Star-shaped heat dissipater and lens mount made from anodised aluminium
- Switch integrated in the lamp head
- Enormous light output and extremely long LED life
- **Supplied with** extra-strong magnetic clamp and screw clamp featuring a star-shaped handle, 1.6 m connection lead

Length mm	Light output W	art.no.	€
590	3	**763012** 0001	259,–

7151

Halogen workplace lamps

- **20 Watt**
- **With flexible arm**
- **VDE-tested**
- For concentrated workplace lighting
- Built-in safety transformer
- Heat-resistant Tempax glass
- Halogen light bulbs: 12 V or 24 V, 20 W
- Connection: 230 V Euro plug or 24 V direct connection
- Colour: black
- **Broad-beam lamp:** Screw or clamp attachment (magnetic clamp optional)
- **Spot lamp:** freestanding, secured by magnetic clamp



Design	Arm length mm	Head Ø mm	Light source	art.no.	€
Broad-beam lamp with clamp attachment, 230 V supply	465	75	12 V / 20 W	**770101** 0001	115,30
Broad-beam lamp with clamp attachment, 24 V supply	465	75	24 V / 20 W	770101 0003	118,75
Spot lamp with magnetic attachment, 230 V supply	400	65	12 V / 20 W	770101 0002	149,25

7151

Accessories and spare parts

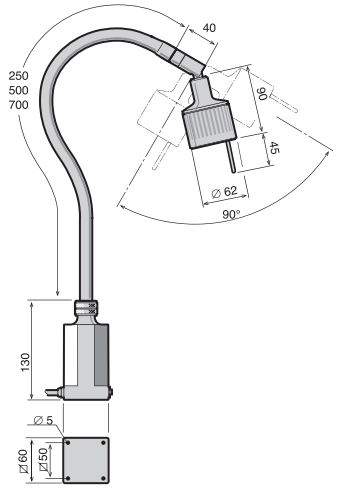
Designation	art.no.	€
Magnetic clamp, Ø 100 mm, for broad-beam lamps	**770130** 2001	31,90
Halogen light bulb for broad-beam lamps	770130 3001	22,45
Magnetic clamp, Ø 80 mm, for spot lamps	770130 2002	36,05
Halogen spotlight bulb	770130 3002	25,55

7151

sunnex Machinery and industrial lighting

IP20

- **HS - 20 Watt**
- Classic and exceptionally high-quality flexible arm
- Lamp head made from shock-proof hard plastic
- Convenient spotlight package
- Available either with a built-in transformer or as a low-voltage variant for connecting directly to the machine
- For use as a spotlight e.g. for production machines, machine tools, assembly work, high-precision mechanical work etc.
- Connection: 230 V Euro plug or 24 V direct connection



model	Arm length mm	Connection	Design	Light source	art.no.	€
14100	500	230 V	Non-articulated	12 V / 20 W	**772001** 4100	141,–
14110	500	230 V	Articulated	12 V / 20 W	772001 4110	150,–
14400	500	24 V	Non-articulated	24 V / 20 W	772001 4400	89,80
14410	500	24 V	Articulated	24 V / 20 W	772001 4410	98,50

7149

Safety in the workplace

Please protect your eyes, ears and respiratory system!

HEDI Machine workbench lamps

DUO

- Spot and broad-beam machine lamp
- Special folding lens for switching quickly between spotlight and broad-beam
- Lamp head can be swivelled in any direction and rotated through 340°
- Protection class II, protection rating IP20, TÜV/GS
- Supplied with 3 m connection lead, 230 V Euro plug, table clamp and magnetic clamp

Height mm	Width mm	Depth mm	Light source	art.no.	€
680	90	170	12 V / 20 W	**771010** 0001	127,50
680	90	170	12 V / 50 W	771010 0002	186,50

7157

LED

- Broad-beam machine lamp with 3x 1 Watt LED bulbs
- Low energy consumption, low housing temperature (max. 26 °C)
- Max. bulb temperature 47 °C
- No UV rays; objects in the light beam will not heat up
- Protection class II, protection rating IP20
- Supplied with 3 m connection lead, 230 V Euro plug, table clamp and magnetic clamp

Height mm	Width mm	Depth mm	Light source	art.no.	€
680	90	170	LED, 3x 1 W	**771012** 0001	137,–

7157

Accessories

Description	suitable for	art.no.	€
Magnet, Ø 80 mm	DUO LED	**771011** 0003	19,95
Table clamp, 60 mm span	DUO LED	771011 0004	18,60
Spare lens	DUO	771011 0005	23,–

7157

HEDI *LED pro* machine lamp

- Optimum daylight-quality illumination
- **9x 1 W LED lamps**, low energy consumption
- Objects in the light beam will not heat up
- **Splash-proof IP64**
- Supplied with magnetic clamp and table clamp

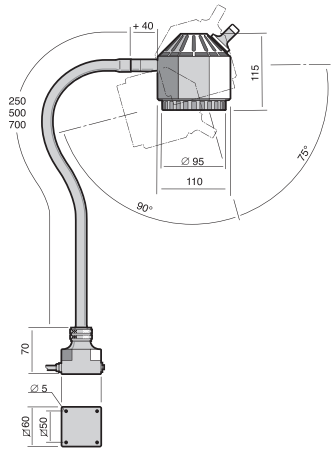
Arm length mm	Connection V	art.no.	€
400	230	**771013** 0001	263,–
400	24	771013 0002	285,–

7157

sunnex Machinery and industrial lighting

- **HF - 50 Watt**
- Robust industrial lamps
- Particularly suitable for all industrial applications where lamps are exposed to cutting fluids, oils and humidity
- Flexible arm
- Lamp head made from shock-proof hard plastic
- Ergonomically-shaped handle
- Available either with a built-in transformer or as a low-voltage variant for connecting directly to the machine
- For use as spot lighting in or on machine tools, both indoors and outdoors
- Connection: 230 V Euro plug, or 12 V / 24 V direct connection

Available on request:
- Low-voltage variant with protection class IP65
- Version with long-reach articulated arm system (AAS model series)

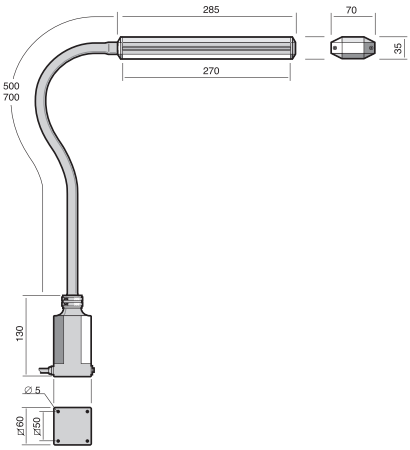


model	Arm length mm	Connection	Light source	Design	art.no.	€
12420E	500	230 V	12 V / 50 W	Non-articulated	**772021** 2420	232,–
12430E	500	230 V	12 V / 50 W	Articulated	772021 2430	244,–
12420	500	12 V	12 V / 50 W	Non-articulated	772021 2421	163,–
12430	500	12 V	12 V / 50 W	Articulated	772021 2431	173,–
12620	500	24 V	24 V / 50 W	Non-articulated	772021 2620	169,–
12630	500	24 V	24 V / 50 W	Articulated	772021 2630	181,–

7149

sunnex Workplace lamps

- **CL Flex - 11 Watt**
- Compact fluorescent tube
- Exceptionally long service life
- Low-dazzle
- Lamp head made from extrusion-moulded aluminium
- Choice of two lengths
- 11 W light output is approx. equivalent to a 75 W bulb
- Use: general industrial applications, measurement stands



model	Arm length mm	Connection	Light source	art.no.	€
14820	500	230 V	11 W	**772025** 4820	142,–

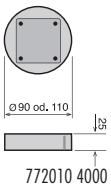
7149

sunnex Accessories and spare parts

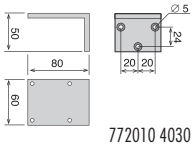
- **For the sunnex lighting range**

model	Description	suitable for model	art.no.	€
14000	Magnetic base, Ø 90 mm	HS	**772010** 4000	30,80
12010	Magnetic base, Ø 110 mm	HF CL	772010 2010	42,30
14030	Wall bracket, L-shaped, 50 x 80 mm	HS HF CL	772010 4030	19,20
14020	Screw clamp, 42 mm	HS HF CL	772010 4020	24,40
14015	Table base, octagonal, Ø 200 mm	HS HF CL	772010 4015	33,30
12030	Transformer, 230 V to 12 V, max. 75 W, IP23	HS HF	772010 2030	94,90
12035	Transformer, 230 V to 24 V, max. 75 W, IP23	HS HF	772010 2035	96,20
15140	Halogen light bulb, 12 V / 20 W	HS	772010 5140	5,60
15141	Halogen light bulb, 24 V / 20 W	HS	772010 5141	7,20
13831	Halogen light bulb, 12 V / 50 W	HF	772010 3831	12,60
13834	Halogen light bulb, 24 V / 50 W	HF	772010 3834	13,60
15882	Fluorescent tube, 11 W	CL	772010 5882	10,50

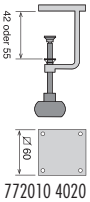
7149



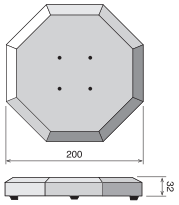
772010 4000



772010 4030



772010 4020



772010 4015

Deburring tools, model S blades

	model	Description	suitable blades	art.no.	€
	E01000	Aluminium hexagonal handle with non-replaceable S10 blade	-	**750101** 0008	4,95
	E02000	Plastic hexagonal handle with 1x S10 blade; blade holding fixture 3.2 mm diameter	All model S blades (3.2 mm)	750101 0009	3,55
	RB1000	Aluminium hexagonal handle with 1x S10 blade; blade holding fixture 3.2 mm diameter	All model S blades (3.2 mm)	750101 0012	8,45
	NG1003	Plastic NG-1 handle; 1 of each blade: S10, S20, S35	All model S blades (3.2 mm)	750110 1003	11,95
	NG1005	Plastic NG-1 handle with 1 of each blade: S10, S20, S35, S101, S202	All model S blades (3.2 mm)	750110 1005	14,90
	NG3003	Plastic NG-3 handle with telescopic shank; 1x S holder with telescopic shank; 1 of each blade: S100, S20, S30 blades	All model S blades (3.2 mm)	750110 3003	15,90

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Deburring tools, model N blades

	model	Description	suitable blades	art.no.	€
	TB1000	Aluminium hexagonal handle with 1x N1 blade; blade holding fixture 2.6 mm diameter	All model N blades (2.6 mm)	**750101** 1020	6,50
	NG2002	Plastic NG-2 handle with 1 of each blade: N1 and N2	All model N blades (2.6 mm)	750101 2002	10,25
	NG2004	Plastic NG-2 handle with 1 of each blade: N1, N2, N3, N6	All model N blades (2.6 mm)	750101 2004	13,45
	NG3002	Plastic NG-3 handle; 1x N blade holder with 1 of each blade: N1 and N2	All model N blades (2.6 mm)	750101 3002	13,95

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Deburring tools, model N and S blades

	model	Description	suitable blades	art.no.	€
	LB1000	Plastic Uni handle; extendible double-end SN blade holder, 20 - 110 mm (N) or 20 - 94 mm (S); 2.6 mm and 3.2 mm holding fixture; 1 of each blade: N1 and N2	All model N (2.6 mm) and model S (3.2 mm) blades	**750101** 1010	13,95

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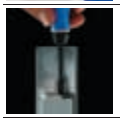
Rear-side deburring tools and countersinks

	model	Description	suitable blades	art.no.	€
	RC1000	Rear-side deburring tool, aluminium handle with R1 blade; range 3 - 5.5 mm, can be used for front and rear-side work	R1	**750120** 1000	34,75
	RC2000	Rear-side deburring tool, aluminium handle with R2 blade; range 5 - 10 mm, can be used for front and rear-side work	R2	750120 2000	40,90
	RC2200	Rear-side deburring tool, aluminium handle with R3 blade; range 10 - 22 mm, can be used for front and rear-side work	R3	750120 2200	41,35
	NG3100	Plastic NG-3 handle; 1x C blade holder; 1x C20 countersink	All model C countersinks	750101 3100	30,95

7143

Deburring tools, scraper blades

	model	Description	suitable blades	art.no.	€
	SC1000	Uni handle with T120 blade; extendible blade can be locked in any position	T120	**750105** 1005	18,55
	NG3700	NG-3 handle; D holder with D50 blade	All D blades	750105 3700	18,95
	NG3710	NG-3 handle; D holder with D66 blade; for deburring the rear side of transverse bores with diameters from 4 mm	All D blades	750105 3710	16,95
	SC800	Aluminium hexagonal SC handle with T80 blade	T80	750105 0001	15,25

7143

Deburring tools, ceramic blades

	model	Description	suitable blades	art.no.	€
	CR2000	CERA-Cut CR2100 handle with CR2200 blade; convex ceramic blade with extremely long life, ideal for plastics and other soft materials	CR2200, CR2500	**750105** 2000	28,95
	CR2300	CERA-Cut CR2100 handle with CR2500 blade; concave ceramic blade with extremely long life, ideal for plastics and other soft materials	CR2200, CR2500	750105 2300	33,75
	CR1100	Soft-grip handle; non-replaceable ceramic blade with extremely long life; ideal for plastics and other soft materials		750105 1100	37,95

7143

Special deburring tools

	model	Description	suitable blades	art.no.	€
	NG3200	NG-3 handle; L holder with L3 blade; range 1 - 8 mm	L3, L4, L5, L6, L7	**750107** 3200	16,95
	DB1000	Plastic handle with hand protection; 2x N80 blades	N80, N80 M42	750115 1001	18,90

7143

NOGA YT 2000 scraper set

- Set consists of one D75 scraper, one T80 scraper and the new YT1000 handle
- Quick-release tool replacement
- Flexible clamping handle, fits any hand

model	Contents	art.no.	€
YT200	YT1000 handle; blades: 1x D75, 1x T80	**750505** 4000 7145	22,95

NOGA YT1000 handle

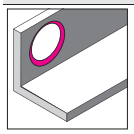
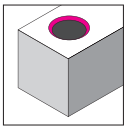
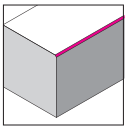
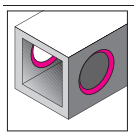
- **For needle-point files, diamond files and scraper blades**
- Quick-release tool replacement
- Flexible clamping handle, fits any hand
- Supplied without blades

model	Clamp Ø mm	Length mm	art.no.	€
YT1000	2.2 to 4.5	90	**750501** 4000 7143	5,45

NOGA Deburring blades

- 2.6 mm and 3.2 mm rotary blades
- Extensive range for quick and easy deburring

Model N blades

	model	appropriate for	Angle °	Material	Hardness	Holding fixture Ø mm	Design		art.no.	€	
	N1	Steel, aluminium, plastics	40	HSS M2	63 Rc	2.6	Right-hand cutting edge	10	**751001** 0001	1,45	
	N1 TiN	Abrasive plastics	40	HSS M2 TiN	63 Rc	2.6	Right-hand cutting edge	10	751001 1001	2,80	
	N1 (left-hand)	Steel, aluminium, plastics	40	HSS M2	63 Rc	2.6	Left-hand cutting edge	10	751001 0010	2,50	
	N1C	Hardened steel, special plastic	50	Solid carbide	1,400 - 1,700 HV	2.6	Right-hand cutting edge	1	751001 3001	6,55	
	N1D	Glass, ceramics	-	Diamond	1,400 - 1,700 HV	2.6	Right-hand cutting edge	1	751001 2001	13,25	
	N10	Plastic, harder materials	45	HSS M35	65 Rc	2.6	Right-hand cutting edge	10	751001 0070	2,30	
	N2	Brass, cast iron	80	HSS M2	63 Rc	2.6	Left-hand cutting edge	10	751001 0020	1,45	
	N2 TiN	Stainless steel	80	HSS M2 TiN	63 Rc	2.6	Left-hand cutting edge	10	751001 1020	2,80	
	N2C	Hardened steel, special plastic	80	Solid carbide	1,400 - 1,700 HV	2.6	Right/left-hand cutting edge	1	751001 3020	6,55	
	N3	Internal and external deburring, steel, aluminium	50	HSS M2	63 Rc	2.6	Right-hand cutting edge	10	751001 0030	1,80	
	N6	Rear side of workpieces, steel, aluminium	40	HSS M2	63 Rc	2.6	Right-hand cutting edge	1	751001 0060	5,30	

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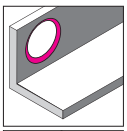
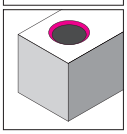
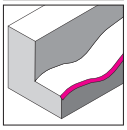
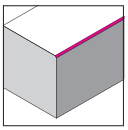
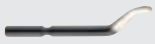
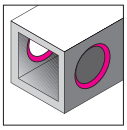
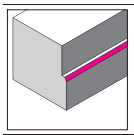
Model S blades

model	model	appropriate for	Holding fixture Ø mm	Angle °	Material	Hardness	Design		art.no.	€	
	S10	Steel, aluminium, plastics	3.2	40	HSS M2	63 Rc	Right-hand cutting edge	10	**751005** 0001	1,70	
	S10 TiN	Abrasive plastics	3.2	40	HSS M2 TiN	63 Rc	Right-hand cutting edge	10	751005 1001	3,25	
	S10 (left-hand)	Steel, aluminium, plastics	3.2	40	HSS M2	63 Rc	Left-hand cutting edge	10	751005 0010	2,90	
	S10C	Hardened steel, special plastic	3.2	50	Solid carbide	1,400 - 1,700 HV	Right-hand cutting edge	10	751005 0005	6,55	
	S10D	Glass, ceramics	3.2	-	Diamond	1,400 - 1,700 HV	Right-hand cutting edge	10	751005 2001	15,20	
	S100	Plastic, harder materials	3.2	78	HSS M35	65 Rc	Right-hand cutting edge	10	751005 0100	1,70	
	S100 TiN	Plastic, harder materials	3.2	78	HSS M35 TiN	65 Rc	Right-hand cutting edge	10	751005 1100	4,05	
	S20	Brass, grey cast iron	3.2	60	HSS M2	63 Rc	Left-hand cutting edge	10	751005 0020	1,70	
	S20 TiN	Stainless steel	3.2	60	HSS M2 TiN	63 Rc	Left-hand cutting edge	10	751005 1020	4,05	
	S20C	Hardened steel, special plastic	3.2	80	Solid carbide	1,400 - 1,700 HV	Right/left-hand cutting edge	10	751005 0025	6,55	
	S35	Straight edges, all materials	3.2	55	HSS M2	63 Rc	Right/left-hand cutting edge	10	751005 0035	1,70	
	S101	Fine edges, all materials	3.2	40	HSS M2	63 Rc	Right-hand cutting edge	10	751005 0101	1,70	
	S101 TiN	Fine edges, all materials	3.2	40	HSS M2 TiN	63 Rc	Right-hand cutting edge	10	751005 1010	3,25	
	S101 (left-hand)	Fine edges, all materials	3.2	40	HSS M2	63 Rc	Left-hand cutting edge	10	751005 0110	2,80	
	S150	Bores < Ø 1.5 mm	3.2	45	HSS M2	63 Rc	Right-hand cutting edge	10	751005 0150	1,70	
	S150 TiN	Bores < Ø 1.5 mm	3.2	45	HSS M2 TiN	63 Rc	Right-hand cutting edge	1	751005 1050	4,05	
	S202	Brass, grey cast iron	3.2	55	HSS M2	63 Rc	Left-hand cutting edge	10	751005 0202	1,70	
	S202 TiN	Brass, grey cast iron	3.2	55	HSS M2 TiN	63 Rc	Left-hand cutting edge	10	751005 1202	4,05	
	S30	Internal and external deburring, steel, aluminium	3.2	40	HSS M2	63 Rc	Right-hand cutting edge	10	751005 0030	1,70	
	S60	Rear side of workpieces, steel, aluminium	3.2	40	HSS M2	63 Rc	Right-hand cutting edge	1	751005 0060	5,80	
	S80	Shallow steps	3.2	35	HSS M2	63 Rc	Right-hand cutting edge	1	751005 0080	2,60	
	S80 TiN	Shallow steps	3.2	35	HSS M2 TiN	63 Rc	Right-hand cutting edge	1	751005 1080	4,90	

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Blade set

appropriate for	Description	model	art.no.	€
For steel, aluminium, plastics, brass and cast iron	1 of each blade: S10, S20, S30, S35, S60, S70, S100C, S101, S150, S202	BS9999	**750505** 9999	29,90

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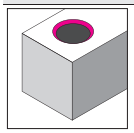
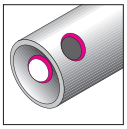
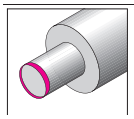
NOGA Countersinking bits

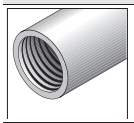
- **HSS**
- 90° countersink angle

	model	Holding fixture Ø mm	Diameter range mm	Material	Hardness	art.no.	€	
	C12	M7	1 - 12	HSS M2	63 Rc	**751020** 0012	17,40	
	C20	M7	1 - 20	HSS M2	63 Rc	751020 0020	24,90	
	C30	M7	1 - 30	HSS M2	63 Rc	751020 0030	35,10	
	RD3.2	3.2	0 - 3	HSS M2	63 Rc	751020 0032	12,35	
	RD6.3	3.2	1 - 6.3	HSS M2	63 Rc	751020 1063	15,25	
	RD8.3	3.2	1 - 8.3	HSS M2	63 Rc	751020 1083	15,45	
	RD10.4	3.2	1 - 10.4	HSS M2	63 Rc	751020 1105	15,45	
	RD16.5	3.2	1 - 16.5	HSS M2	63 Rc	751020 1650	20,65	
	R1	-	3 - 3.5	HSS M2	63 Rc	751025 0001	11,80	
	R2	-	5 - 10	HSS M2	63 Rc	751025 0002	11,80	
	R3	-	10 - 22	HSS M2	63 Rc	751025 0003	19,45	
	RDE18	3.2	4 - 18	HSS M2	63 Rc	751020 0100	13,60	

7144

NOGA Thread deburring blades

- **HSS**
- 3.2 mm rotary blade
- For cleaning internal threads

	model	Holding fixture Ø mm	Working area mm	Angle °	Material	Hardness		art.no.	€	
	TC	3.2	1 - 9	90	HSS M2	58 Rc	10	**751005** 0300	5,50	

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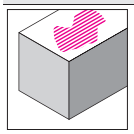
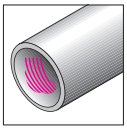
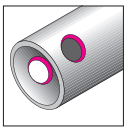
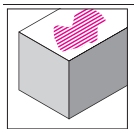
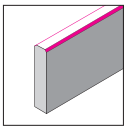
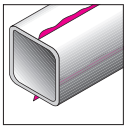
NOGA Scraper blades

- Wide range of applications
- Quick and easy to use

	model	Holding fixture Ø mm	Ø mm	Length mm	Angle °	Material	Hardness		art.no.	€	
	D50	3.2	2.5	50	60	HSS M2	63 Rc	10	**751015** 0050	7,90	
	D55	3.2	2.5	50	60	Solid carbide	1,400 - 1,700 HV	1	751015 0055	20,40	
	D75	3.2	2.5	75	60	HSS M2	63 Rc	1	751015 0075	8,70	
	T80	-	4.2	80	60	115CrV3	63 Rc	1	751015 0080	8,50	
	T120	-	7.4	120	60	115CrV3	63 Rc	1	751015 0120	16,65	
	D66	3.2	2.7	50	50	HSS M2	63 Rc	10	751015 0066	6,15	
	D77	3.2	2.7	75	50	HSS M2	63 Rc	1	751015 0077	8,70	
	CR2200	-	-	-	90	Ceramic	1,400 - 1,700 HV	1	751015 2200	21,35	
	CR2500	-	-	-	90	Ceramic	1,400 - 1,700 HV	1	751015 2500	24,30	
	S70	3.2	3.2	57	45	HSS M2	63 Rc	1	751005 0070	*5,75*	

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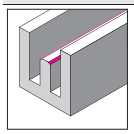
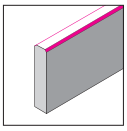
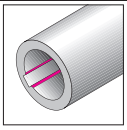
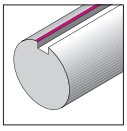
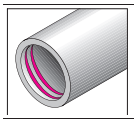
NOGA Double-edge cutting blades

- **HSS**
- Deburring on both sides in one stroke

	model	Working area mm	Angle °	Material	Hardness	suitable for holder		art.no.	€	
	L3	1- 8	50	HSS M2	65 Rc	L holder	1	**751015** 0003	4,15	
	L4	0 - 0.25	50	HSS M2	65 Rc	L holder	1	751015 0004	4,15	
	N80 (used in pairs)	0 - 12	55	HSS M2	65 Rc	(N holder)	10	751010 0080	4,25	
	N80 M42 (used in pairs)	0 - 12	55	HSS M42	67 Rc	(N holder)	10	751010 0180	6,75	
	N70K	1.2 - 8	55	HSS M2	65 Rc	K holder	1	751010 0070	6,85	
	N80K	2.4 - 11	55	HSS M2	65 Rc	K holder	10	751010 0085	5,20	
	N80KM42	2.4 - 11	55	HSS M42	67 Rc	K holder	10	751010 0185	6,75	
	N90K	3 - 15	55	HSS M2	65 Rc	K holder	1	751010 0090	7,65	
	OR	1 - 3	40	HSS M2	65 Rc	SN holder, S holder, NG-1 handle	1	751005 0310	7,15	

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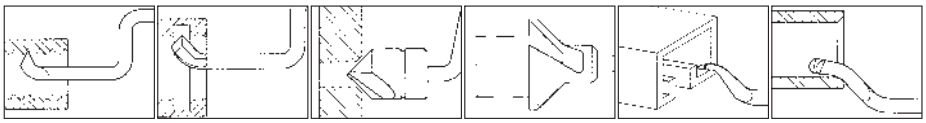
NOGA 007 universal deburring tool set

- Set for deburring and countersinking work
- Thread cleaning and deburring for internal threads over Ø 9 mm
- Deburring O-ring recesses from Ø 3 mm upwards
- Countersinking up to Ø 16.5 mm
- External deburring from Ø 4 mm to Ø 18 mm
- Deburring small profiles and bores from Ø 1.5 mm upwards
- Deburring particularly hard materials



model	Description	art.no.	€
SP1007	RB handle, aluminium; 1 of each blade: OR, RD 16, 5, RDE18, TC, S100, S150	**750505** 0007	49,95

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Blade holder

model	Description	Length mm	suitable blades	art.no.	€
EL02003	S holder, extendible from 30 to 115 mm, suitable for NG-3 handle	131	All model S blades (Ø 3.2 mm)	**750501** 2002	8,55
EL01033	N holder, extendible from 25 to 115 mm, suitable for NG-3 handle	131	All model N blades (Ø 2.6 mm)	750501 2003	8,55
CH3000	C holder with M7 external thread to hold countersinks, suitable for NG-3 handle	131	C12, C20, C30 countersinks	750501 2004	6,95
EL06023	T holder, suitable for NG-3 handle	131	T50 and T70 scrapers	750501 2005	6,95
EL05003	D holder with M3 clamping screw and key, suitable for NG-3 handle	131	D50 and D66 scrapers	750501 2006	5,90
EL04003	K holder with M3 clamping screw, suitable for NG-3 handle	135	All model K blades	750501 2007	6,95
EL07013	L holder with square 3 mm holding fixture and 4 mm clamping screw, suitable for handle NG-3	131	All model L blades	750501 2008	6,95
SN1000	SN holder with double-ended extendible blade holder, 2.6 and 3.2 mm; suitable for UNI handle	145 x Ø 7	All model S and model N blades	750501 2001	9,50

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S blades Ø 3.2 mm — N blades Ø 2.6 mm

Handles

model	Description	Dimensions	suitable blades	art.no.	€
NG1000	NG-1 handle with spare compartment in cap	-	All model S blades (Ø 3.2 mm)	**750501** 3010	7,55
NG2000	NG-2 handle with spare compartment in cap	-	All model N blades (Ø 2.6 mm)	750501 3020	7,55
NG3000	NG-3 handle with spare compartment in cap	-	All holders (not SN 1000)	750501 3030	7,55
UH1000	Plastic universal handle (UNI)	130 x 26	SN holder and T120 blades	750501 1010	6,95
RB1600	RG handle, hexagonal, aluminium	130 x 12	S blades, Ø 3.2 mm	750501 1600	8,55
SC1300	SC handle	120 x 12	D50, D55, D66, D75, D77, T80 scrapers	750501 1300	11,25

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NOGA Hand-held deburring tool sets

750505 8150

750505 8200

750505 8250

750505 8350

In a blister pack

model	Description	appropriate for	art.no.	€
NG8000	NG-2 handle 10x N1 blades	For steel, aluminium and plastics	**750505** 8000	18,90
NG8050	NG-2 handle 20x N1 blades	For steel, aluminium and plastics	750505 8050	29,75
NG8100	NG-2 handle 20x N10 blades	For plastics and hard materials	750505 8100	26,95
NG8150	NG-1 handle 10x S10 blades	For steel, aluminium and plastics	750505 8150	17,90
NG8200	NG-1 handle 20x S10 blades	For steel, aluminium and plastics	750505 8200	30,95
NG8250	NG-1 handle 20x S100 blades	For plastics and hard materials	750505 8250	37,75
NG8300	NG-3 handle 1x N holder 5x N1 blades 5x N2 blades	For steel, aluminium, plastics, brass and cast iron	750505 8300	21,90
NG8350	NG-3 handle 1x S holder 5x S10 blades 5x S20 blades	For steel, aluminium, plastics, brass and cast iron	750505 8350	22,90

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751510 9200

751510 9300

Hand-held deburring tool sets

model	Dimensions	Description	Contents	art.no.	€
NG9200	251 x 120 x 40	"Bronze" deburring tool set, 13 pcs.	1x NG-3 handle 1x N holder, 1x S holder 1x C holder, 1x C20 countersink insert 1x D holder, 1x D50 scraper blade 1 of each blade: N1, N2, S10, S20, S30, S150	**751510** 9200	69,50
NG9300	251 x 120 x 40	"Silver" deburring tool set, 11 pcs.	1x NG-3 handle 1x S holder 1x RC2000 rear-side deburring tool 1x plastic hexagonal handle, holding fixture diameter 3.2 mm 1 of each RotoDrive: RD3.2 mm, 10.4 mm, 16.5 mm 1x external RotoDrive, 18.0 mm 1 of each blade: S10, S20, S30	751510 9300	99,90
NG9400	270 x 230 x 50	"Gold" deburring tool set, 20 pcs.	1x NG-3 handle 1x aluminium hexagonal SC1300 handle 1x plastic hexagonal handle, holding fixture diameter 3.2 mm 1x S holder, 1x N holder, 1x C holder 1x C20 countersink insert 1x D holder, 1x D50 scraper blade 1x K holder, 1x N80K blade 1 of each blade: N1, N2, S10, S20, S30, S150, D66, RD10.4 1x hexagonal offset screwdriver, 1.5 mm	751510 9400	109,50
NG9500	270 x 230 x 50	"Platinum" deburring tool set, 25 pcs.	1x DB1000 hand-held deburring tool 1x NG-1 handle, 1x NG-3 handle 1x aluminium hexagonal TB1000 handle 1x S holder, 1x N holder 1x K holder, 1x N80K blade 1x D holder, 1x D66 scraper blade 1x C holder, 1x C20 countersink insert 1x T holder, x T70 scraper blade 1x RD 10.4 mm RotoDrive 1x external RotoDrive, 18.0 mm 1 of each blade: N1, N2, S10, S20, S30, S150 1 hexagonal offset screwdriver, 1.5 mm	751510 9500	178,50
SP7700	270 x 230 x 50	"TOP7" 7-piece deburring tool set	1x NG3100, 1x NG3700, 1x NG3200, 1x SC8000, 1x NG3300, 1x NG3710, 1x NG3003	751510 7700	135,–

7145

751510 7700

751510 9500

751510 9400

NOGA Universal hand-held deburring tool set

- **4 pieces**
- Hand-held deburring tools, colour-coded and fitted with different blades
- For machining **steel, brass, aluminium, plastic**

model	Description	art.no.	€
E02100	4x E0 handles, black, colour-coded; 1 of each blade: S10, S20, S100, S150	**750505** 0004	15,90
		7145	

Scraper

DIN 8350 A | DIN 8350 C | DIN 8350 B

Flat scraper, chrome vanadium steel, wooden handle

DIN 8350 A

Blade length mm	Blade width mm	art.no.	€
100	16	**742071** 0100	5,40
150	18	742071 0150	5,80
200	20	742071 0200	6,75
		7134	

Flat scraper with carbide indexable insert (K20), plastic handle

- Carbide indexable insert, four-edged, ground and lapped
- Can also be used with electric hand scrapers

Blade length mm	Insert dimension mm	Scraper, complete art.no.	€	Carbide indexable insert art.no.	€
290	25 x 20 x 2	**742072** 0290	48,60	**742073** 0290	28,40
340	25 x 25 x 2	742072 0340	58,25	742073 0340	29,35
340	25 x 30 x 2	742072 1340	61,40	742073 1340	34,90
		7134		7134	

Flat scraper, carbide-tipped, wooden handle

Blade length mm	Blade width mm	art.no.	€
200	15	**742074** 0200	41,70
220	20	742074 0220	44,45
250	25	742074 0250	46,65
		7134	

Triangular hollow scraper, chrome vanadium steel, wooden handle

- DIN 8350 C

Blade length mm	Blade width mm	art.no.	€
100	12	**742079** 0100	4,50
125	12	742079 0125	4,95
150	14	742079 0150	5,20
200	16	742079 0200	5,95
		7134	

Triangular solid scraper, chrome vanadium steel, wooden handle

- DIN 8350 B

Blade length mm	Blade width mm	art.no.	€
150	10	**742084** 0150	5,75
200	14	742084 0200	6,75
		7134	

KÜMI coolant delivery system

- Adjustable coolant hose, consisting of individual plastic elements
- For use on all machine tools
- Replacement for conventional systems, plastic elements can be flexibly adjusted which allows coolant to reach any desired position
- Non-conducting and resistant to most chemicals and solvents
- Also suitable for blowing out workpieces, clamping equipment and machine tables
- Complete systems with magnetic anchoring bases and individual elements allow for a large number of possible combinations
- Operating pressure max. 6 bar
- **Operating pressure up to max. 60 bar is possible by attaching band clamps 7630104001 or 7630204001**
- Compatible with the following systems: FLEXOLINE, OSSMANN, LOC-LINE, HYDRA, SNAPLOC, LUBE-COOL, VARIO, MAXIFLEXI
- Systems benefit from closer-fitting modules. This improves the ability to withstand higher pressures and ensures that the fluid stream remains directionally stable.

1/4"

Contents	art.no.	€
Magnetic base system, 1/4"; articulated hose (16 modules); round nozzle, ID 6.4 mm; threaded connector, 1/4"; metal ball valve, IT-ET 1/4"; magnetic base, round, 2 IT 90°; threaded nozzle, 1/4", for 13 mm fabric hose	**763010** 0000	86,35
Magnetic base system, 1/4"; articulated hose (2x 13 modules); 2 flat nozzles, 24 mm; Y-distributor, threaded connector, 1/4"; metal ball valve, IT-ET 1/4"; magnetic base, round, 2 IT 90°; threaded nozzle, 1/4", for 13 mm fabric hose	763010 1000	109,75
Articulated hose set, 1/4"; articulated hose (2x 10 modules); 3 round nozzles, ID 1.6 / 3.2 / 6.4 mm; 2 threaded connectors, 1/4" + 1/8" NPT	763010 0001	10,45
Articulated hose (2x 10 modules), approx. 31 cm long	763010 0002	8,95
4 round nozzles, ID = 1.6 mm	763010 1001	7,65
4 round nozzles, ID = 3.2 mm	763010 1002	7,65
4 round nozzles, ID = 6.4 mm	763010 1003	7,65
4 threaded connectors, 1/8" NPT	763010 1011	7,65
4 threaded connectors, 1/4" NPT	763010 1012	7,65
2 flat nozzles, 24 mm wide	763010 1021	7,65
2 flat nozzles, 30 mm wide	763010 1022	12,95
2 Y-distributors	763010 1031	7,65
2 elbow connectors, 90°	763010 1051	7,65
2 T-distributors	763010 1061	11,25
2 shut-off valves for articulated hose	763010 1071	14,35
2 shut-off valves for 1/4" articulated hose	763010 1081	14,35
2 shut-off valves, external thread 1/4" NPT	763010 1091	14,35
1 triple holder for 1/4" T-distributor	763010 2003	*11,25*
1 magnetic base with ball valve (internal thread 1/4") and threaded nozzle for 13 mm fabric hose	763010 2004	31,95
1 monoblock distributor with 4 outlets, 1/4" and IT 3/8"	763010 2005	42,95
1 pair of assembly pliers for attaching and releasing 1/4" articulated pieces	763010 3014	32,95
2 band clamps, 1/4", for retroactive fixing up to 60 bar	763010 4001	4,95

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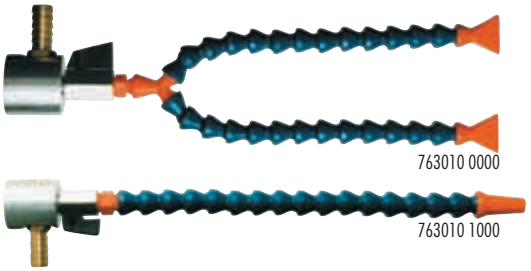
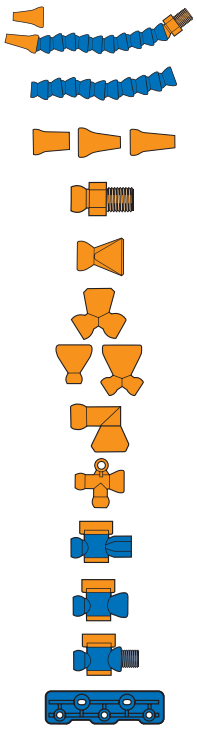
1/2"

Contents	art.no.	€
Articulated hose set, 1/2"; articulated hose (2x 5 modules); 2 round nozzles, ID 9.5 / 12.7 mm; 2 threaded connectors, 3/8" + 1/2" NPT	**763020** 0001	16,75
Articulated hose (2x 5 modules), approx. 29 cm long	763020 0002	12,25
4 round nozzles, ID = 6.4 mm	763020 1001	9,75
4 round nozzles, ID = 9.5 mm	763020 1002	9,75
4 round nozzles, ID = 12.7 mm	763020 1003	9,75
4 threaded connectors, 1/2" NPT	763020 1011	9,75
4 threaded connectors, 3/8" NPT	763020 1012	9,75
2 flat nozzles, 32 mm wide	763020 1021	9,75
2 flat nozzles, 50 mm wide	763020 1022	16,25
2 Y-distributors	763020 1031	9,75
2 reducers, 1/2" to 1/4"	763020 1041	9,75
2 Y-reducers, 1/2" to 2x 1/4"	763020 1042	9,75
2 elbow connectors, 90°	763020 1051	9,75
2 T-distributors	763020 1061	9,75
2 shut-off valves, internal thread 1/2"	763020 1071	22,95
2 shut-off valves for 1/2" articulated hose	763020 1081	22,95
2 shut-off valves, external thread 1/2" NPT	763020 1091	22,95
1 triple holder for 1/2" T-distributor	763020 2003	*9,75*
1 monoblock distributor with 4 outlets, 1/2" and IT 3/8"	763020 2005	*56,75*
1 pair of assembly pliers for attaching and releasing 1/2" articulated pieces	763020 3012	33,95
2 band clamps, 1/2", for retroactive fixing up to 60 bar	763020 4001	5,75

7147


763010 0000

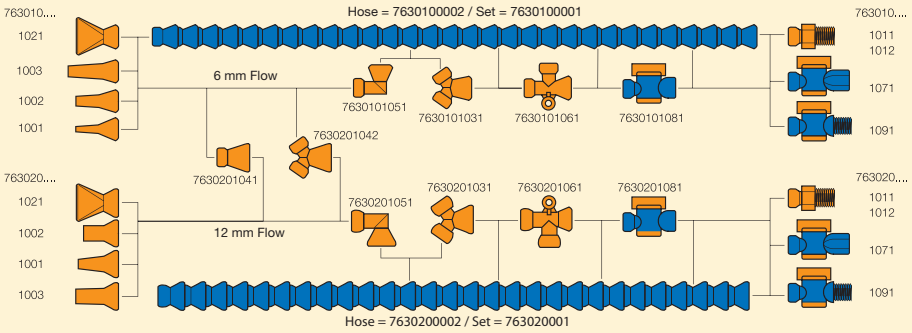
763010 1000



763010 2004

Additional versions available on request!

763020 3012



Sets

- 18 pieces
- 1/4" or 1/2"
- Case with foam inlay

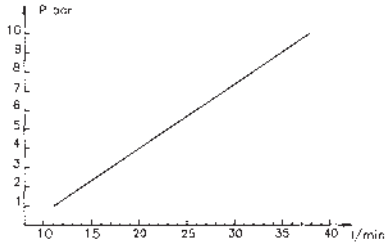
Connection	Contents	art.no.	€
1/4"	6 hose modules; 1 pair of assembly pliers; 1 Y-distributor; 1 shut-off valve, 3 flat nozzles: 16-hole / 32 mm / 27 mm, 3 round nozzles: Ø 1.6 / 3.2 / 6.4 mm, 2 threaded connectors, 1/4" and 1/8"; 1 non-return valve, 1/4"	**763025** 1814	121,50
1/2"	6 hose modules; 1 pair of assembly pliers; 1 Y-distributor; 1 shut-off valve, 3 flat nozzles: 8-hole / 50 mm / 35 mm, 3 round nozzles: Ø 6.4 / 9.5 / 12.7 mm, 2 threaded connectors ,3/8" and 1/2"; 1 non-return valve, 1/2"	763025 1812	125,–

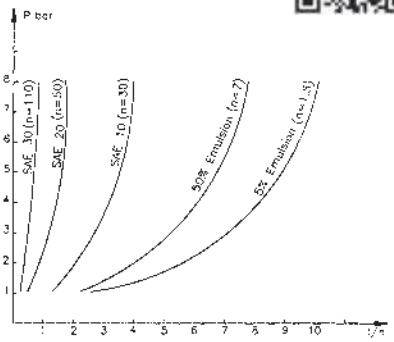
7147

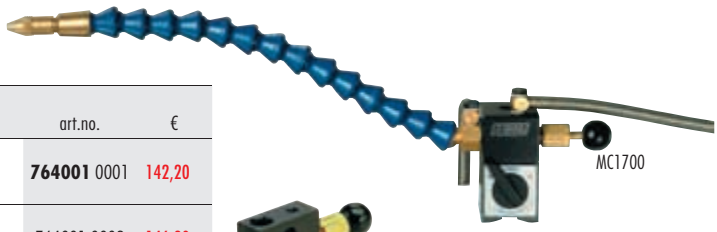
763025 1812

NOGA MINI-COOL coolant spray system

- For optimum and economical coolant distribution
- Pinpoint-accurate coolant supply for greater endurance
- Strong magnetic base
- Separate on/off switch
- Non-rusting nozzles and connection siphons
- Articulated arm = KÜMI hose







model	Description	art.no.	€
MC1700	Complete system (264 mm) with magnetic base, on/off switch for air and coolant, air supply hose (1 m), coolant supply hoses (1 m)	**764001** 0001	142,20
MC1800	Complete system (334 mm) with magnetic base, on/off switch for air and coolant, air supply hose (1 m), coolant supply hoses (1 m)	764001 0002	146,30
MC2000	Complete system (479 mm) with magnetic base, on/off switch for air and coolant, air supply hose (1 m), coolant supply hoses (1 m)	764001 0003	150,35
MC3200	Complete system (2x 479 mm) with magnetic base, on/off switch for air and coolant, air supply hose (1 m), coolant supply hoses (1 m)	764001 0006	249,25
MC0120	Adjustment nozzle	764001 0010	32,20
MC0360	Siphon hose, 1 m	764001 0011	16,75
MC0311	Siphon hose, 2 m	764001 0012	22,95
MC0380	Air hose, 1 m	764001 0013	16,75
MC0302	Air hose, 2 m	764001 0014	23,–
MC0232	Banjo screw incl. ring gasket	764001 9902	9,80
MC0001	Nozzle	764001 0017	5,45
MC0101	Articulated hose, 14 elements with nozzle and connector	764001 0018	30,20
MC0102	Articulated hose, 19 elements with nozzle and connector	764001 0019	32,65
MC0103	Articulated hose, 29 elements with nozzle and connector	764001 0020	39,15

7146

MC0360

MC0380

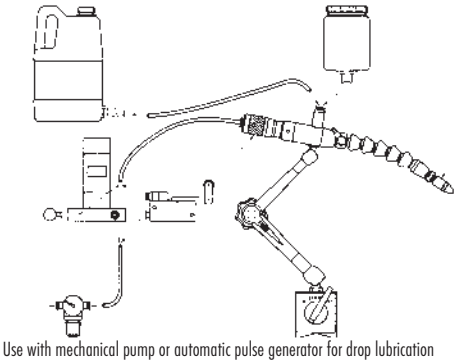
MC0232

MC0001

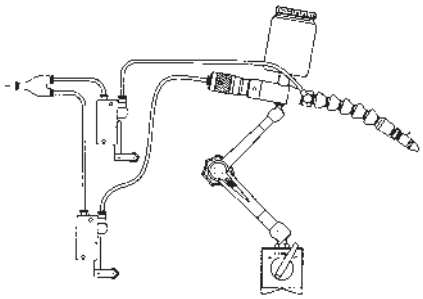
MC0101

NOGA COBRA 2000 coolant spray system

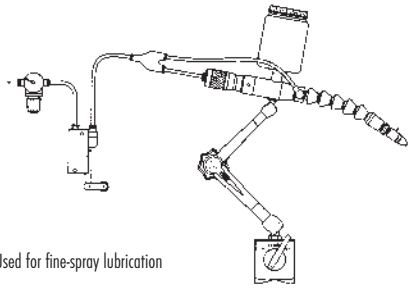
- For optimum and economical drop or spray delivery of coolants and emulsions
- Drop or spray supply can be either manual or automatic
- Straightforward connection to compressed air supply (3 - 9 bar)



Use with mechanical pump or automatic pulse generator for drop lubrication

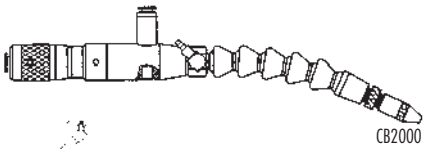


Used for constant drop or fine-spray lubrication

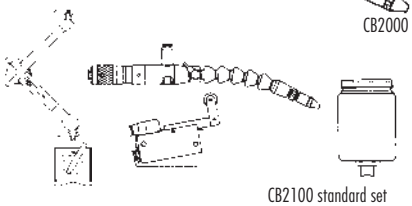


Used for fine-spray lubrication

765001 0001



CB2000



CB2100 standard set

model	Description	art.no.	€
CB2000	Base unit	**765001** 0001	170,60
CB2100	Standard set: CB2000 base unit; DG61003 articulated arm with SH1000 magnetic base; CB0146 plastic container, 0.35 litres	765001 0002	511,85

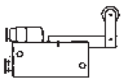
7146

CB0146

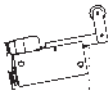
Accessories

model	Description	art.no.	€
CB0146	Plastic container, 0.35 litres	**765003** 0001	32,35
CB0147	Plastic container, 3.5 litres	765003 0002	48,90
SH1000	Pump, mechanical	765003 0003	107,80
DG60013	Articulated arm	765003 0010	102,95

7146

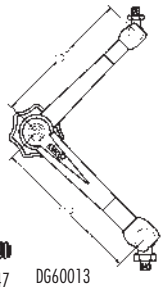


SH1000



SH1010

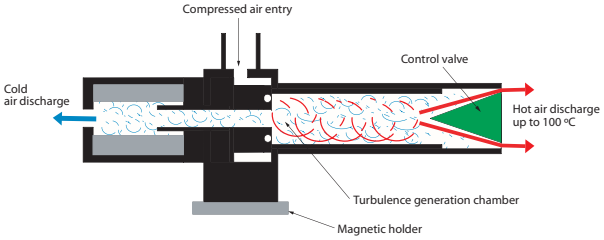
CB0147

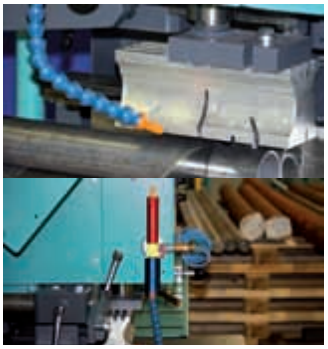


DG60013

SARA® Pneumatic cold air nozzle

- Localised cooling for machine tools
- Dual function: both hot and cold air
- Ideal for use when no lubricating or coolant fluids are desired
- Single compressed air connection (3 - 8 bar)
- **Operates based on the principle of a vortex tube in which two counter-rotating air flows are created**
- Cold air outlet in the blue component (down to -48 °C)
- Hot air outlet in the red component (up to 100 °C)
- Air consumption at 7 - 8 bar approx. 270 l/min
- Supplied with magnetic base, spherical valve, connection for 3/8" quick-action pneumatic coupling, silencer, 1/2" articulated hose with round nozzle





Hose connector Ø in	Compressed air connection in	art.no.	€
1/2"	3/8"	**763030** 0001	399,–

7123

CleanJet

- **Working medium: Cutting fluid and compressed air**
- Specially designed to be ideal for cleaning bores, pockets, undercuts and other contours
- A choice of 3 different nozzles allows you to control the intensity of the cleaning jet
- ***CleanJet*** is a rapid traverse cleaner which can be integrated quickly and easily into automation sequences with a short subroutine
- Cutting fluid pressure range: 5 to 120 bar / Compressed air pressure range: 5 to 10 bar
- Minimum speed: 30 1/min. / maximum speed 400 1/min.
- Individual pipes and nozzles also available on request

Design	Length mm	Pipe Ø mm	Low flow art.no.	€	Normal flow art.no.	€	High flow art.no.	€
Short	30	16	**763051** 0030	138,–	**763052** 0030	138,–	**763053** 0030	138,–
Standard	100	16	763051 0100	144,–	763052 0100	144,–	763053 0100	144,–
Long	180	16	763051 0180	146,–	763052 0180	146,–	763053 0180	146,–
Extra-long	250	16	763051 0250	165,–	763052 0250	165,–	763053 0250	165,–
			7172		7172		7172	

CleanStar

- **Working medium: Cutting fluid**
- 360° cleaning range
- Manometer versions include a facility to check the status of the pump, filter and entire supply line
- Repeatable, systematic and thorough cleaning of the machine space

Design	Length mm	Shank length mm	Shank Ø mm	Head Ø mm	art.no.	€
Vertical version, diagonal outlet arrangement	110	40	16	60	**763060** 0101	194,–
Vertical version, diagonal outlet arrangement, with manometer	110	40	16	60	763060 0102	204,–
Horizontal version, straight outlet arrangement	190	40	16	60	763060 0201	236,–
Horizontal version, straight outlet arrangement, with manometer	190	40	16	60	763060 0202	249,–
Horizontal version, traight outlet arrangement	120	40	16	60	763060 0301	204,–
Horizontal version, straight outlet arrangement, with manometer	120	40	16	60	763060 0302	238,–
Vertical version, straight outlet arrangement	110	40	16	60	763060 0401	194,–
Vertical version, straight outlet arrangement, with manometer	110	40	16	60	763060 0402	204,–
					7172	

CleanCase

- Cleaning tools for mounting on a machine spindle, suitable for 16 mm Weldon holding fixtures

Contents	Dimensions L x W x H mm	art.no.	€
1 CleanStar, horizontal 1 CleanStar, vertical 1 CleanJet pipe, 30 mm 1 CleanJet pipe, 100 mm 1 CleanJet pipe, 180 mm 3 universal nozzles (1 in each version) 1 manometer 1 adapter 1 articulated joint 4 spare locking screws 1 hexagonal screwdriver	270 x 230 x 70	**763050** 1000	798,–
		7172	

LANG CLEAN-TEC blow-out fan

- Flushing out bores
- Blowing out chips
- For all machining centres
- Streamlines the cleaning process
- Keeps production times consistent
- Saves on compressed air and shortens blow-out time
- Keeps chips from showering over the operator's hand and arm
- Cleans surfaces prior to touching with measuring probes
- Can be clamped in Ø 20 mm cylindrical tool holders
- Automatic substitution from the tool magazine
- Fibreglass shank with steel core

Caution: Clean-Tec may only be used in sealed cabins. Maintain minimum distance from the workpiece when changing and when the spindle stops!

Fan

Description	max. speed r/min	art.no.	€
Clean-Tec, Ø 160 mm	6.000 - 12.000	**742090** 0160	166,50
Clean-Tec, Ø 260 mm	5.000 - 8.000	742090 0260	172,95
Clean-Tec, Ø 330 mm	3.000 - 8.000	742090 0330	178,50

7136

Spare part kits

- Blades, springs and alignment pins - 4 of each

Description	art.no.	€
Spare parts kit, Ø 160 mm	**742091** 0160	51,95
Spare parts kit, Ø 260 mm	742091 0260	55,75
Spare parts kit, Ø 330 mm	742091 0330	59,50

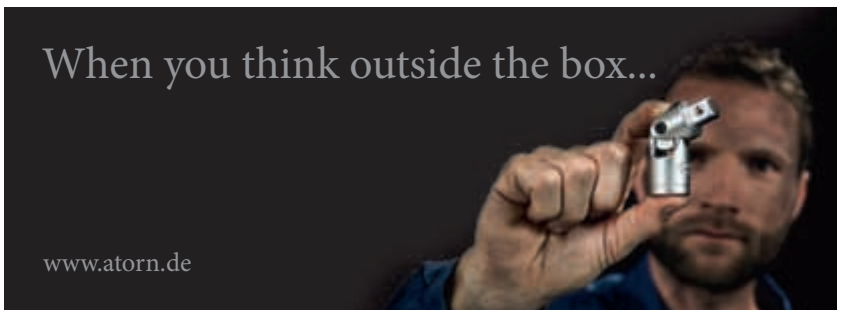
7136

Chip hook

- Ergonomic 2-component handle
- Robust chip protection shield
- Optional chip scraper
- Price per pack

Description	Contents	art.no.	€
Chip hook 300 mm (without chip scraper)	1 piece	**961002** 0300	19,90
Chip hook 500 mm (without chip scraper)	1 piece	961002 0500	21,90
Chip scraper width 120 mm, height 65 mm	2 pieces	961002 0600	11,95

9132



...new things are created.

ATORN®
High quality for great performance

sunnex OSM machine shoes

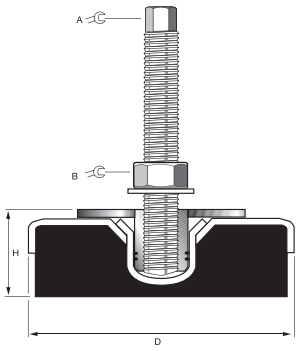
Compensation/vibration damping

- For loads of up to 5,500 kg per machine shoe
- Outstanding compensation properties
- Efficient vibration damping
- Reduction in disturbing direct noise
- Pressure plate with fine-pitch thread, adjusted using integrated compensation screws
- Steel casing, rubber damping element, resistant to most types of grease, acid, oil and coolant
- Particularly suitable for machine tools, presses, stamping and embossing machines, injection moulding machines

775010 0080

775010 0120

775010 0160



model	Load area daN	Injection moulding mach. <100 cycles/hr. daN	Presses, up to 125 strikes/min. daN	Presses, 125-160 strikes/min. daN	Presses, 160-200 strikes/min. daN	A wr. width mm	B wr. Width mm	D mm	H mm	Adjustment screw mm	**Galvanised** art.no.	€
OSM 1	50 - 500	50 - 200	70 - 200	60 - 140	50 - 120	9	19	80	38 - 50	M12 x 1.25 x 120	**775010** 0080	28,15
OSM 2	400 - 1,000	200 - 400	200 - 400	120 - 350	100 - 250	12	24	120	46 - 59	M16 x 1.5 x 120	775010 0120	47,50
OSM 3	800 - 2,000	400 - 1,000	400 - 1,400	350 - 1,100	250 - 725	15	30	160	53 - 68	M20 x 1.5 x 170	775010 0160	63,50
OSM 4	1,500 - 4,000	1,500 - 2,500	1,700 - 2,800	1,000 - 2,100	800 - 1,400	15	30	160	54 - 69	M20 x 1.5 x 170	775010 1030	101,50
OSM 5	3,000 - 5,500	2,000 - 3,800	3,000 - 4,000	2,000 - 3,500	1,400 - 2,400	15	30	200	56 - 71	M20 x 1.5 x 170	775010 1040	131,50

7153

Accessories and spare parts

Designation	suitable for model	art.no.	€
Standard screw, M12 x 1.25 x 120	OSM 1	**775020** 0001	4,50
Standard screw, M16 x 1.5 x 120	OSM 2	775020 0002	5,–
Standard screw, M20 x 1.5 x 170	OSM 3, 4, 5	775020 0003	8,65
Extended screw, M12 x 1.25 x 210	OSM 1	775020 1001	10,70
Extended screw, M16 x 1.5 x 210	OSM 2	775020 1002	12,85
Extended screw, M20 x 1.5 x 210	OSM 3, 4, 5	775020 1003	16,70
Washer	OSM 1	775020 2001	0,70
Washer	OSM 2	775020 2002	0,95
Washer	OSM 3, 4, 5	775020 2003	1,10
Nut, M12 x 1.25	OSM 1	775020 3001	1,50
Nut, M16 x 1.5	OSM 2	775020 3002	1,50
Nut, M20 x 1.5	OSM 3, 4, 5	775020 3003	2,30

7153

Machine shoes

sunnex

Suitable for setting up tool, printing, plastic, textile and many other machines in all industries.
90% of all set-up problems with machines and related power units can be resolved with SUNNEX machine shoes.
Eliminates up to 85% of vibrations, impacts and noise.

Advantages:

- Low cost
- No need to create foundations
- Production can commence immediately after delivery and fitting
- Retrofitting your machine fleet can be done quickly

Selection of machine shoes:

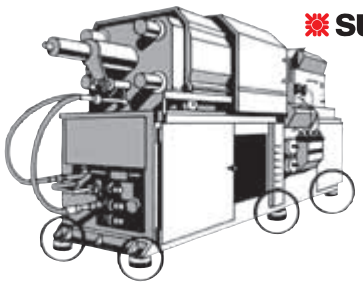
In order to select the correct SUNNEX machine shoe sizes, certain Information is needed:

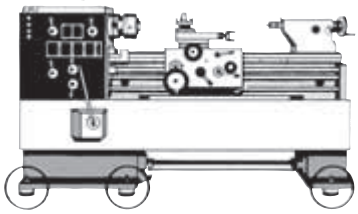
- Machine weight
- Number of supported surfaces for the machine shoes
- Supported load per machine shoe

Calculation:

$$\frac{\text{Machine weight}}{\text{Number of supported surfaces}} = \text{Size of the machine shoes}$$

(within the threshold range, the smaller of the possible sizes must be used!)

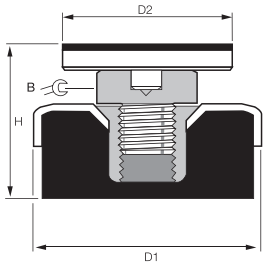




sunnex *FSM* machine shoes

Compensation/vibration damping

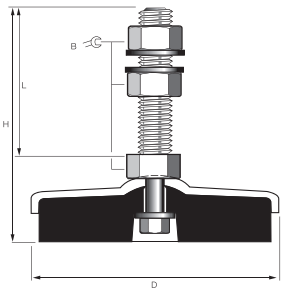
- For loads of up to 1,000 kg per machine shoe
- For applications where screw holes are not available or are difficult to access
- Efficient vibration damping
- Reduction in disturbing direct noise
- Specially for free-standing applications
- Coated pressure plate, compensation screw in steel housing, damping element made from rubber, resistant to most types of grease, acid, oil and coolant
- Particularly suitable for machine tools, workshop machinery, stamping and embossing machines



model	Load area kg	D1 mm	D2 mm	H mm	B wr. Width mm	art.no.	€
FSM 11	50 - 500	80	60	55 - 65	30	**775030** 0011	*45,70*
FSM 12	400 - 1000	120	80	68 - 77	36	775030 0012	*85,–*
						7154	

sunnex *AM* machine shoes

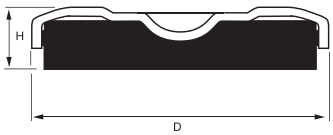
- **Compensation/vibration damping**
- For loads of up to 2,000 kg per machine shoe
- Stainless steel version also available for particularly demanding applications
- Articulated screw for inclined contact surfaces
- For damping light and medium-heavy machines
- Stainless steel version particularly suitable for humid, wet or corrosive environments with particularly high hygiene requirements
- Galvanised version for less challenging environments
- Integrated compensation screw
- Pitch adjustable by seven degrees
- Particularly suitable for the foodstuffs industry, process engineering, conveyor tracks,
- smaller workshop machines



model	Load area kg	D mm	L mm	H mm	Adjustment screw mm	B mm	**Stainless steel** art.no.	€	**Galvanised** art.no.	€
AM 21	50 - 150	68	100	125	M10 x 1.5	17	**775040** 0001	*38,80*	**775050** 0001	*22,40*
AM 21	50 - 150	68	120	146	M12 x 1.75	19	775040 1001	*39,40*	775050 1001	*24,50*
AM 21	50 - 150	68	120	148	M16 x 2.0	24	775040 2001	*50,10*	775050 2001	*26,55*
AM 21	50 - 150	68	120	151	M20 x 2.5	30	775040 3001	*65,–*	775050 3001	*30,75*
AM 22	100 - 250	68	100	125	M10 x 1.5	17	775040 0002	*41,20*	775050 0002	*24,50*
AM 22	100 - 250	68	120	146	M12 x 1.75	19	775040 1002	*41,70*	775050 1002	*23,35*
AM 22	100 - 250	68	120	148	M16 x 2.0	24	775040 2002	*51,65*	775050 2002	*29,30*
AM 22	100 - 250	68	120	151	M20 x 2.5	30	775040 3002	*67,50*	775050 3002	*32,50*
AM 31	50 - 500	98	120	158	M12 x 1.75	19	775040 4001	*54,90*	775050 4001	*37,35*
AM 31	50 - 500	98	120	158	M16 x 2.0	24	775040 5001	**62,30**	775050 5001	*39,40*
AM 31	50 - 500	98	120	158	M20 x 2.5	30	775040 6001	*74,20*	775050 6001	*42,65*
AM 31	50 - 500	98	150	191	M24 x 3.0	36	775040 7001	*101,50*	775050 7001	*55,20*
AM 32	450 - 1,000	98	120	158	M12 x 1.75	19	775040 4002	*57,30*	775050 4002	*39,40*
AM 32	450 - 1,000	98	120	158	M16 x 2.0	24	775040 5002	*64,70*	775050 5002	*41,70*
AM 32	450 - 1,000	98	120	158	M20 x 2.5	30	775040 6002	*76,30*	775050 6002	*44,75*
AM 32	450 - 1,000	98	150	191	M24 x 3.0	36	775040 7002	*104,50*	775050 7002	*57,30*
AM 41	900 - 1,500	140	120	169	M12 x 1.75	19	775040 0003	*84,65*	775050 0003	*52,50*
AM 41	900 - 1,500	140	120	169	M16 x 2.0	24	775040 1003	*90,95*	775050 1003	*54,90*
AM 41	900 - 1,500	140	120	169	M20 x 2.5	30	775040 2003	*102,50*	775050 2003	*57,60*
AM 41	900 - 1,500	140	150	202	M24 x 3.0	36			775050 3003	*69,20*
AM 42	1,400 - 2,000	140	120	169	M12 x 1.75	19	775040 0004	*87,40*	775050 0004	*54,90*
AM 42	1,400 - 2,000	140	120	169	M16 x 2.0	24	775040 1004	*94,50*	775050 1004	*57,–*
AM 42	1,400 - 2,000	140	120	169	M20 x 2.5	30	775040 2004	*105,50*	775050 2004	*60,20*
AM 42	1,400 - 2,000	140	150	202	M24 x 3.0	36	775040 3004	*130,50*	775050 3004	*71,60*
							7154		7154	

sunnex CM machine shoes

- **Vibration damping**
- For loads of up to 4,000 kg per machine shoe
- For machines with integrated compensation screws
- Very low height
- Stainless steel version also available on request
- Pressure plate made from galvanised sheet steel, base element made from high-strength rubber
- Very low height
- Extremely cost-effective
- Particularly suitable for workshop machinery, scales, slim machines and equipment

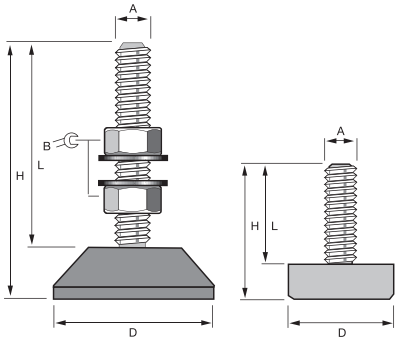


model	Load area kg	D mm	H mm	art.no.	€
CM 80	50 - 500	80	20	**775060** 0080	13,40
CM 120	400 - 1000	120	24	775060 0120	29,50
CM 160	800 - 2000	160	29	775060 0160	44,75
CM 200	1500 - 4000	200	30	775060 0200	74,85

7154

sunnex LLM machine shoes

- **Compensation**
- For loads of up to 75 kg per machine shoe
- Galvanised and stainless compensation screws with vulcanised rubber bases
- Specially for lighter equipment such as woodworking machines, compressors, smaller industrial machines and office/domestic appliances
- Compensation screws with various types of vulcanised rubber bases
- Can be fitted in internal and external bores in the frame or casing
- Particularly suitable for small workshop machines, compressors and office/domestic appliances

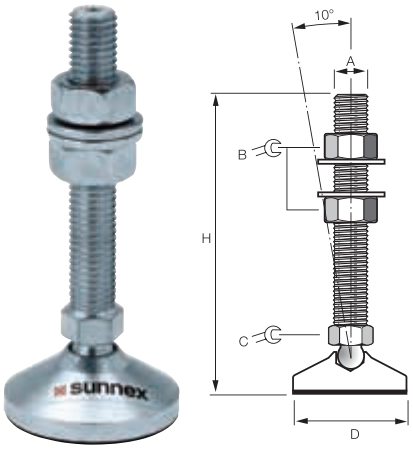


model	Load area kg	D mm	A mm	B mm	H mm	L mm	art.no.	€
LLM 19	75	46	M10	17	53	38	**775070** 0046	8,35
LLM 259	30	30	M6	-	38	28	775070 0030	4,15

7154

sunnex LL machine shoes

- **Compensation**
- For loads of up to 2,000 kg per machine shoe
- Articulated screw allows inclines of up to 10° with respect to the contact surface
- Anti-slip feet to ensure a stable setup
- Galvanised steel version
- Provides stable compensation specifically for lighter equipment such as small workshop machines, instrument cabinets and office/domestic appliances
- Galvanised compensation screw with articulated base
- Allows inclines of up to 10° with respect to the contact surface
- Thin friction mat made from specially treated nitrile rubber, coated
- Particularly suitable for small workshop machines, instrument cabinets and office/domestic appliances

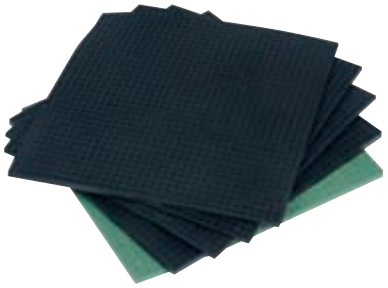


model	Load area kg	D mm	H mm	h mm	B mm	C mm	A mm	art.no.	€
LL 10	1,000	32	105	75	19	14	M12	**775075** 0010	30,25
LL 12	1,200	45	105	75	19	14	M12	775075 0012	31,90
LL 20	2,000	60	110	80	22	16	M14	775075 0020	33,15

7154

sunnex SP damping mat

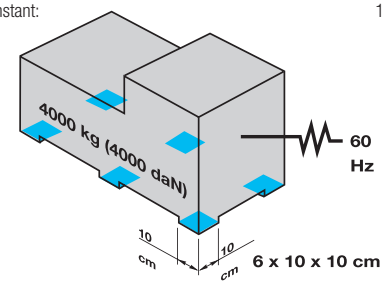
- Five different damping classes
- Efficient impact/vibration damping
- Reduces the transmission of machine noise
- Reduces the tendency of machines to "wander"
- For a wide range of industrial applications
- Five different versions with varying hardness, natural frequencies and load bearing capacities
- Specially developed nitrile rubber, resistant to most types of grease, acid, oil and coolant
- Can be cut to size



Calculation

Example:

Machine weight:	4,000 kg
Interference frequency:	60 Hz
Circulation:	10 x 10 cm / SP unit
Number of surfaces:	6
Constant:	1.5

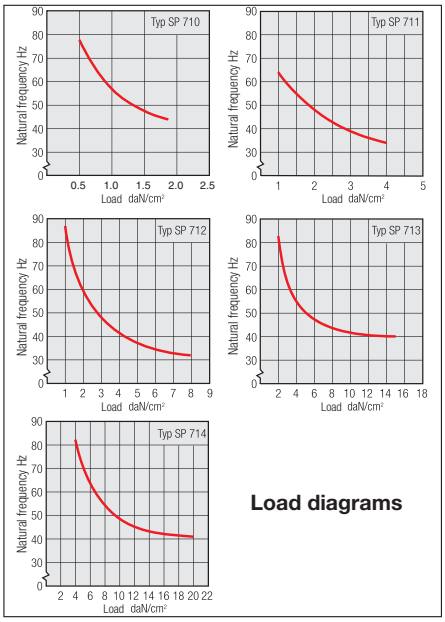


Surface load / plate:

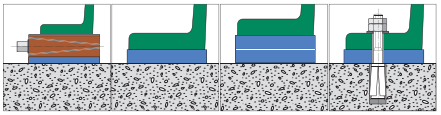
$$\frac{\text{Weight}}{\text{Total surface}} = \frac{4000}{6x10x10} = 6.67 \text{ daN/cm}^2$$

Max. natural frequency of the MP unit:

$$\frac{\text{Interference frequency}}{1.5} = \frac{60}{1.5} = 40 \text{ Hz}$$



Load diagrams



model	Load area daN/cm²	Colour	Dimensions L x W x H mm	art.no.	€
SP 710	0.5 - 1.75	Black	450 x 450 x 8	**775501** 0710	*75,45*
SP 711	1.0 - 4.0	Black	450 x 450 x 8	775501 0711	*75,45*
SP 712	1.0 - 8.0	Black	450 x 450 x 8	775501 0712	78,40
SP 713	2.0 - 15.0	Black	450 x 450 x 13	775501 0713	107,50
SP 714	8.0 - 20.0	Green	450 x 450 x 13	775501 0714	104,50

7154

...suggestions are heard.

ATORN®
High quality for great performance

Small metal saws

Standard version
- For sawing all materials

Sheet length mm	Saw frame with saw blade art.no.	€
150	**725101** 0150	1,90
	7162	

With ergonomic handle
- For sawing all materials

Sheet length mm	Saw frame with saw blade art.no.	€
150	**725110** 0150	10,20
	7162	

Saw blades
- Fits 725101 0150 and 725110 0150

Description	Saw blades art.no.	€
12 saw blades per pack	**725115** 0150	6,75
	7162	

Metal saw bow

With wooden handle
- For 300 mm handsaw blades
- Solid, strong frame
- Cross-recessed square holding fixtures

Length mm	art.no.	€
530	**725120** 0300	11,25
	7162	

With ergonomically shaped handle
- For 300 mm handsaw blades
- Strong frame
- Cross-recessed square holding fixtures

Length mm	art.no.	€
400	**725125** 0300	13,50
	7162	

ATORN® Handsaw blades

- **HSS:** single-sided, non-bending, flexibly part-hardened blade made from medium-high-alloy high-speed steel.
- **HSS bi-metal:** single-sided, teeth made from hardened HSS; back made from spring steel, extremely flexible
- Unit prices when purchased in packs

725150 3024

HSS

Length mm	Height mm	Width mm	Tooth per inch		art.no.	€
300	13	0.63	18	10	**725140** 3018	1,50
300	13	0.63	24	10	725140 3024	1,50
300	13	0.63	32	10	725140 3032	1,50
					7162	

HSS bi-metal

Length mm	Height mm	Width mm	Tooth per inch		art.no.	€
300	13	0.63	18	10	**725150** 3018	1,18
300	13	0.63	24	10	725150 3024	1,18
300	13	0.63	32	10	725150 3032	1,18
					7163	

ATORN® Jigsaw blades

- Compatible with the brands AEG, Bosch, Elu, Festo, Flex, Hitachi, HolHer, Mafell, Makita, Metabo
- Prices per packaging unit = 20 units/pack

Can be as with Bosch type	Length mm	Toothed length mm	Tooth pitch mm	appropriate for	20-piece pack art.no.	€
T118A	75	50	1.2	For thin material, straight cuts in metal, non-ferrous metal, sheet metal, aluminium	**725550** 0001	26,20
T118B	75	55	2.0	For thick material, straight cuts in metal, non-ferrous metal, sheet metal, aluminium	725550 0002	26,20
T127D	100	75	3.0	Ideal for aluminium, straight cuts in aluminium, non-ferrous metals, metal, glass fibre reinforced plastics	725550 0003	26,20
T118AF	75	50	1.2	Straight cuts (flexible and break-resistant) in soft steel, aluminium, non-ferrous metal, stainless steel, steel, Plexiglas	725550 0004	36,–
T101B	100	75	2.5	Ideal for straight and fine cuts in hardwood, softwood, plywood, laminated fibreboard, plastics	725550 0005	26,20

7163

Mixed sets

Can be as with Bosch type	Length mm	Toothed length mm	Tooth pitch mm	appropriate for	20-piece pack art.no.	€
T118A	76.5	50	1.2	8x for thin material, straight cuts in metal, non-ferrous metal, sheet metal, aluminium;		
T118B	76.5	50	2.0	8x for thick material, straight cuts in metal, non-ferrous metal, sheet metal, aluminium;	**725550** 0006	30,80
T127D	100	75	3.0	4x ideal for aluminium, straight cuts in aluminium, non-ferrous metal, metal, glass fibre-reinforced plastic		
T144D	100	75	4	8x hardwood and softwood up to 60 mm, soft plastics up to 50 mm, rough cut;		
T101B	100	75	2.5	8x hardwood and softwood, plywood, fibreboard up to 50 mm, soft plastics, clean cut;	725550 0007	25,60
T119BO	76.5	50	2.0	4x for tight curves and even right angles in wood and soft plastics up to 20 mm		

7163

725550 0006

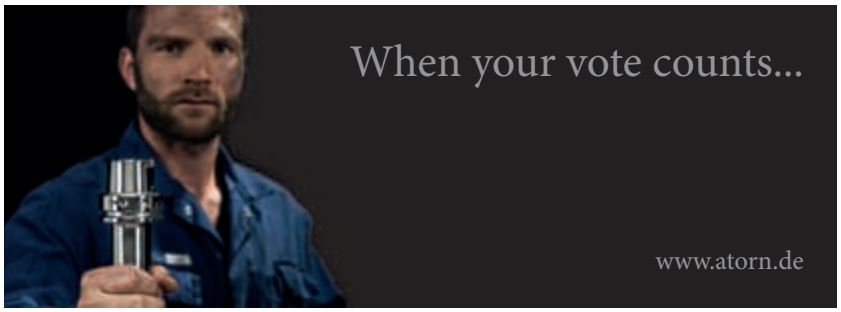
725550 0007

ATORN® Sabre saw blades, bi-metal

- ½" universal shank, compatible with products by AEG, Bosch, Fein, Metabo (Flex only in some cases)
- Prices per packaging unit = 5 units/pack

Can be as with Bosch type	Length mm	Toothed length mm	Tooth pitch mm	appropriate for	5-piece pack art.no.	€
S922BF	150	130	1.8	Rapid cut; thick sheet metal 3 - 8 mm, solid pipes/profiles 10 - 100 mm	**725560** 0008	13,60
S922EF	150	130	1.4	Thin sheet metal 1.5 - 4 mm, pipes/profiles 5 - 100 mm	725560 0009	13,60
S922AF	150	130	1.0	Effortless, fine cut; thin sheet metal 0.7 - 3 mm, fine pipes/profiles 5 - 100 mm	725560 0010	13,60
S1122BF	200	180	1.8	Rapid cut; thick sheet metal 3 - 8 mm, solid pipes/profiles 10 - 175 mm	725560 0011	17,–
S1122EF	200	180	1.4	Flexible flush cut; thin sheet metal 1.5 - 4 mm, pipes/profiles 5 - 175 mm	725560 0012	17,–
S1022VF	200	180	1.8 - 2.5	Rapid cut, flexible and break-resistant; metal 3 - 12 mm, wood 3 - 190 mm, plastics	725560 0013	20,60
S1211H	300	280	2.5	Flexible and break-resistant; non-ferrous metal, aluminium, pipes/profiles 3 - 12 mm, wood with nails 3 - 230 mm, plastics	725560 0014	17,80
S1211VF	300	280	1.8 - 2.5	Rapid cut, flexible and break-resistant; metal 3 - 12 mm, wood with nails 3 - 250 mm, plastics	725560 0015	21,–

7163



...suggestions are heard.

ATORN®
High quality for great performance

SARA® Pneumatic engraver

- Suitable for engraving work on steel and non-ferrous metals
- For marking or for reworking older engravings
- With flexible 1.4 m supply hose for unrestricted work
- Mini engraver function allows needle to be used with precision
- Robust stainless steel casing fits comfortably in the hand and prevents fatigue
- Supplied with 1/4" BSPT air connection and plug nipple
- Also suitable for humid environments

Pneumatic engraver

Length mm	Height mm	blows	Working pressure bar	Air consumption l/min	Holding fixture Ø mm	Lift mm	Weight kg	Noise level dB	art.no.	€
160	16	34,000	6.2	4	3.2	0.05	0.2	61.5	**777025** 0001	164,50
									7160	

Spare needles

Description	art.no.	€
Spare needle, Ø 0.05 - 0.10 mm	**777025** 0510	*39,95*
Spare needle, Ø 0.10 - 0.20 mm	777025 1020	*39,95*
Spare needle, Ø 0.20 - 0.30 mm	777025 2030	*39,95*
	7160	

SARA® Pneumatic precision die grinder

- Extremely high speed of 54,000 rpm^{-1}, ideal for industrial applications or for finishing engines/carburettors (fine-tuning)
- Switched on and off by rotary switch.
- Air supply and exhaust hose reduces exhaust air noise and directs exhaust air away from the body
- Air connection, 1/4'' IT
- Supplied with 3 mm collet and spanners for disassembly

Pneumatic precision mini die grinder

Length mm	Height mm	max. speed r/min	Output W	Working pressure bar	Air consumption l/min	Collet Ø mm	Weight kg	Noise level dB	art.no.	€
134	15	54000	155	6.2	135	3.0	0.2	74	**777001** 0001	232,50
									7160	

Accessories

Description	art.no.	€
Collet, Ø 3 mm	**777002** 0030	25,95
	7160	

SARA® One-handed pneumatic die grinder

- Small design for universal use in confined spaces
- Suitable for car and commercial vehicle repairs, mechanical engineering, body construction and metalwork
- Infinitely variable speed control
- Air consumption far below average due to the use of modern pneumatic motors
- Safety lever to prevent accidental switch-on
- Cold-insulating handle
- Supplied with 1/4" BSPT air connection and plug nipple
- Exhaust air can be directed away from users via a 360° rotatable exhaust air cover on the side
- Supplied with Ø 6 mm collet

One-handed pneumatic die grinder

Length mm	Height mm	max. speed r/min	Output W	Working pressure bar	Air consumption l/min	Collet Ø mm	Weight kg	Noise level dB	art.no.	€
150	55	25000	300	6.2	310	6.0	0.4	79.6	**777026** 0001	114,50
									7160	

Accessories

Description	art.no.	€
Collet, Ø 3 mm	**777026** 0103	25,95
Collet, Ø 6 mm	777026 0106	19,95
	7160	

SARA® Pneumatic power drill

- **Lightweight design, high-speed with Ø 1 - 10 mm quick-release drill chuck**
- With spring balancer attachment on the casing
- High-quality planetary gearing and durable motor
- The top-mounted forward/reverse collar is suitable for right-handed and left-handed users
- Exhaust air can be directed away from users via a 360° rotatable exhaust air cover on the side
- Very low exhaust air noise
- Supplied with 1/4" BSPT air connection and plug nipple
- Easy-to-operate switch to select clockwise/anticlockwise rotation

Length mm	Height mm	max. speed r/min	Output W	Working pressure bar	Air consumption l/min	Chuck Ø mm	Weight kg	Noise level dB	art.no.	€
140	140	1600	200	6.2	200	1-10	0.7	70.5	**777027** 0001	229,50
									7160	

SARA® Spring balancer

- Rugged casing made from aluminium alloy
- Steel wire Ø 2.0 mm
- Infinitely variable load settings
- Working length easy to adjust
- Two-point mounting for maximum safety

Load capacity kN	Length mm	Weight kg	art.no.	€
0.4-1.0	1600	0.63	**777036** 0410	59,95
			7160	

SARA® Pneumatic hammer screwdriver, 1/2"

777028 0001

777028 0002

- Double ring hammer mechanism
- Modern appliance with low power/weight ratio
- Made from composite material, with high-alloy components for the hammer mechanism
- Robust and smooth motor
- Optimally adjusted 3-level control for clockwise rotation

Pneumatic hammer screwdriver

Length mm	Height mm	max. speed r/min	Torque N-m	Working pressure bar	Air consumption l/min	Weight kg	Noise level dB	art.no.	€
160	170	11000	650-700	6.2	165	1.3	88.5	**777028** 0001	259,–
190	185	8600	1150-1350	6.2	195	2.1	83.5	777028 0002	269,–
								7160	

777029 0003

Socket sets

Description	Contents	art.no.	€
Long, with protective coating, 1/2"	17 / 19 / 21 AF	**777029** 0003	29,65
Short, 1/2"	9 / 10 / 11 / 13 / 14 / 17 / 19 / 21 / 24 / 27 AF	777029 0010	55,15
		7160	

777029 0010

...dreams come true.

ATORN®
High quality for great performance

SARA® Pneumatic industrial die grinder

- Exhaust air to the rear, 1 m air supply and exhaust hose, and collet key
- Connection thread, 1/4 inch external
- Air pressure required: 6.0 - 6.3 bar

Pneumatic precision industrial die grinder

- Replaceable collet guide and safety rotary valve
- Incl. 3 mm collet
- For deburring and grinding work with burr cutters and grinding points

Rotational speed r/min	Air consumption l/min	Output kW	Weight kg	art.no.	€
60,000	0.2	0.11	0.15	**777009** 0001	299,–
75,000	0.2	0.11	0.15	777009 0002	299,–
				7160	

Pneumatic industrial die grinder

- Resilient bearing to suppress vibration, smooth-running for a fine surface
- Safety lever valve, low-noise
- Incl. 6 mm collet

Rotational speed r/min	Air consumption l/min	Output kW	Weight kg	art.no.	€
25,000	0.92	0.75	1.25	**777012** 0001	479,–
				7160	

Air-Boy pneumatic blow guns

- Ergonomic design, made from shock-proof plastic
- Compressed air volume can be controlled easily by venting
- High air flow at low noise level
- **Connection:** 1/4" internal thread

"Air-Boy" type

Design	Compressed air connection bar	Air consumption (at 8 bar) max. l/min	art.no.	€
With angled nozzle, Ø 6 mm	16	380	**742075** 0006	12,80
With angled nozzle, Ø 8 mm	16	380	742075 0009	12,80
			7123	

"Air-Boy" type with adjustment screw

- For compressed air volumes from 0 to maximum output

Design	Compressed air connection bar	Air consumption (at 8 bar) max. l/min	art.no.	€
With angled nozzle, Ø 6 mm	16	380	**742076** 0006	21,90
			7123	

"Super Silent Air-Boy" type

- Noise level 76 dB (at 6 bar input pressure)

Design	Compressed air connection bar	Air consumption (at 8 bar) max. l/min	art.no.	€
With angled nozzle, Ø 6 mm	12	330	**742077** 0006	20,55
			7123	

ATORN® Pneumatic aluminium blow guns

- Aluminium, anodised and silver coloured; for cleaning workpieces, machine parts and similar items.
- Air flow can be roughly regulated via a control lever
- Valve head made from special oil-resistant rubber
- Replaceable blowing nozzle, Ø 1.5 mm

With standard nozzle

Connection	for interior Ø mm	Connecting thread	art.no.	€
Plug nipple	-	M12 x 1.25	**742086** 0001	17,20
Hose connector	6	M12 x 1.25	742086 0006	12,80
Hose connector	9	M12 x 1.25	742086 0009	12,80
Hose connector	13	M12 x 1.25	742086 0013	12,80

7123

With air jacket nozzle

- Eye protection with eight nozzle holes opening to the side

Connection	for interior Ø mm	Connecting thread	art.no.	€
Hose connector	6	M12 x 1.25	**742088** 0006	16,20
Hose connector	9	M12 x 1.25	742088 0009	16,20

7123

With safety nozzle

- Noise reduction by approx. 15 dB(A)
- Meets the following safety regulations/directives:
- - Swiss National Accident Insurance Fund (SUVA)
- - EU Directive 2003/10/EC (Noise)
- - EU Machinery Directive 2006/42/EC, EN12100
- - Noise and Vibration Protection Ordinance (TRLV-Lärm)
- - OSHA regulations

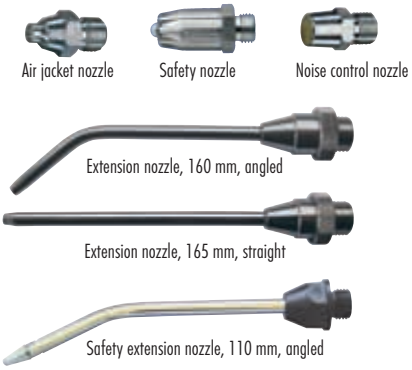
Connection	for interior Ø mm	Connecting thread	art.no.	€
Hose connector	6	M12 x 1.25	**742089** 0006	28,80
Hose connector	9	M12 x 1.25	742089 0009	28,80
Hose connector	13	M12 x 1.25	742089 0013	28,80

7123

Spare nozzles

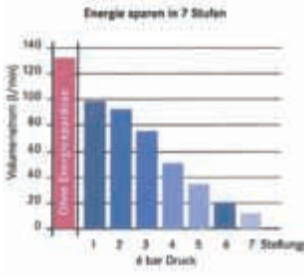
model	Connecting thread	art.no.	€
Regular nozzle	M12 x 1.25	**742092** 0001	1,80
Air jacket nozzle	M12 x 1.25	742092 0002	4,60
Safety nozzle	M12 x 1.25	742092 0003	16,20
Noise control nozzle	M12 x 1.25	742092 0007	3,70
Extension nozzle, 110 mm, angled 45°	M12 x 1.25	742092 0015	8,20
Extension nozzle, 160 mm, angled 45°	M12 x 1.25	742092 0016	8,40
Extension nozzle, 115 mm, straight	M12 x 1.25	742092 0017	7,75
Extension nozzle, 165 mm, straight	M12 x 1.25	742092 0018	7,95
Extension nozzle, 110 mm, angled, low-noise	M12 x 1.25	742092 0019	6,75

7123


Air jacket nozzle
Safety nozzle
Noise control nozzle
Extension nozzle, 160 mm, angled
Extension nozzle, 165 mm, straight
Safety extension nozzle, 110 mm, angled

Air-saving nozzle

- Regulates air volume and reduces pressure in conjunction with blow-out gun, max. operating pressure: 10 bar
- Base body made from aluminium, other parts POM
- Volume flow: 10 to 95 l/min at 6 bar.
- **Benefits:** the energy-saving nozzle is the only nozzle that can be regulated. Among other things, downward regulation prevents sharp, pointed chips or harmful liquids such as emulsions from flying around. This helps to avoid injuries.
- Controlled by turning the operating sleeve to one of 7 increments. Labelled with +/-, total 125°



model	Connecting thread	art.no.	€
Air-saving nozzle	M12 x 1.25	**742092** 0006	16,60

7123

Flex-Boy spiral hose, 1/4" external thread

- 1/4" external thread
- Polyurethane hose (PUR)
- 1/4" external thread
- Connection pressure max. 10 bar

Length m	Hose interior Ø mm	External Ø mm	art.no.	€
2	5	8	**742080** 0208	46,50
4	5	8	742080 0408	55,90
6	5	8	742080 0608	67,–
8	5	8	742080 0808	79,50

7123

Spiral hose

Length m	Hose interior Ø mm	External Ø mm	Description	art.no.	€
8	8	13	Polyurethane with Euro coupling and plug nipple	**777038** 0808	71,95

7160

Hose winder

- Coupling and nipple pre-connected

Length m	Connection	Hose interior Ø mm	External Ø mm	Operating pressure max. bar	Dimensions W x D x H mm	Weight kg	art.no.	€
0.015	1/4" ET	8	12	15	400 x 175 x 330	8.5	**777030** 0001	229,95

7160

Air connection nipple

Description	Length mm	Wr. width mm	art.no.	€
1/4" external thread	33	17	**777031** 0001	2,30
1/4" internal thread	33	17	777031 0002	2,30

7160

777031 0001

777031 0002

777032 0001

777032 0002

Portable device oiler

Input	Outlet	Oil capacity ml	art.no.	€
1/4" IT	1/4" ET	4	**777032** 0001	21,95
1/4" IT	1/4" ET	28	777032 0002	53,95

7160

Lubricating oil for pneumatic tools

Description	art.no.	€
Special air tool oil, 1 litre	**777033** 0001	18,95

7160

Magnetic plate

Description	art.no.	€
Magnetic plate, Ø 150 mm	**777035** 0001	12,45
Magnetic plate, 240 x 140 mm	777035 0002	23,75

7160

777035 0002

777035 0001

Magnetic rods

Description	art.no.	€
0.5 kg load capacity	**777037** 0001	12,50
1.3 kg load capacity	777037 0002	13,95

7160

777037 0001

777037 0002

Maintenance unit

- Modular components connected together to form compact assembly units
- Input pressure max. 15 bar, max. 7 bar for oilers with oil level indicator
- Manometer connection, 1/8" thread at each end, one connecting screw supplied
- Filter element, 20 µm
- Plastic container with bayonet catch
- Manually-operated drain valve for semi-automatic discharging, optional automatic drain
- Optional semi-automatic oil refilling without the need to interrupt operation
- When oil level falls below the minimum, a float closes a signal contact

Connection	Air consumption l/min	Oil capacity ml	art.no.	€
G 1/2"	2200	140	**777034** 0001	*189,50*
			7160	

Connection nozzles and couplings

Hose connector with 1/4" external thread

- Fits all pneumatic blow guns with 1/4" internal thread

Hose connector Ø mm	art.no.	€
6	**742081** 0006	1,60
8	742081 0008	1,60
13	742081 0013	2,45
	7123	

Safety couplings

- Compatible with CEJN 320, Rectus 25 and 26
- One-handed operation, hard-wearing and robust
- Extremely high-capacity diameter, with recoil damper

Design	Coupling art.no.	€	Nipple art.no.	€
1/4" internal thread	**742082** 0114	27,10	**742083** 0114	3,15
1/4" external thread	742082 0214	27,10	742083 0214	3,15
Ø 6 mm hose nozzle	742082 0006	27,10	742083 0006	2,65
Ø 8 mm hose nozzle	742082 0008	27,10	742083 0008	2,65
Ø 13 mm hose nozzle	742082 0013	28,20	742083 0013	3,15
	7123		7123	

AEG Jigsaws

ST 800 XE pendulum jigsaw
- Powerful 705 Watt motor
- Large cutting depth of 110 mm
- Patented FIXTEC quick-release blade holding system for quickly changing saw blades without tools
- 4-way pendulum action
- Electronics with variable speed pre-selection
- Ergonomic D-handle with Softgrip covering for low vibrations and maximum user comfort
- Dust extraction for an optimum view of the cut and clean, precise work
- Base plate can be quickly adjusted without tools for diagonal cuts up to 45°
- **Supplied with** carry case, 4 m power cable, 1 saw blade, chip screen, dust cover, sliding shoe

780022 0004

Pendulum jigsaw STEP 1200 XE
- Powerful 730 Watt motor
- Patented FIXTEC quick-release blade holding system for quickly changing saw blades without tools
- 4-way pendulum action
- Ergonomic D-handle with Softgrip covering for low vibrations and maximum user comfort
- Dust extraction for an optimum view of the cut and clean, precise work
- Chip blower for an optimum view of the cut and clean, precise work
- Base plate can be quickly adjusted without tools for diagonal cuts up to 45°
- **Supplied with** carry case, 4 m power cable, 1 saw blade, chip screen, dust cover, suction hose adapter

780022 0006

model	Output W	Idle stroke count r/min	Lift mm	max. cut depth steel/aluminium mm	Weight kg	art.no.	€
ST 800 XE	705	600 - 2,700	26	10 / 25	2.3	**780022** 0004	159,–
STEP 1200 XE	730	500 - 3,000	26	10 / 30	2.4	780022 0006	209,–

7158

AEG Sabre saw

US 1300 XE sabre saw
- Powerful 1,300 Watt motor
- FIXTEC saw blade holding fixture for quickly and easily changing saw blades without tools
- Throttle switch for infinitely variable stroke speed control allows operation to be adjusted for different materials
- Adjustable saw stop for plunge cuts
- Ergonomic handle with Softgrip for user comfort
- Saw blade can be rotated 180° for all work situations
- **Supplied with** 4 m power cable, 2 saw blades, carry case

model	Output W	Idle stroke count r/min	Lift mm	Weight kg	art.no.	€
US 1300 XE	1,300	0 - 2,800	30	3.8	**780024** 0002	209,–

7158

Milwaukee Power drills

3 year warranty and 1 year full service if registered at www.milwaukeetool.de

DE 10 RX
- Lightweight and compact 10 mm power drill.
- Electronics with speed control
- FIXTEC spindle lock for quick drill bit changes
- Clockwise / anticlockwise rotation
- 10 mm metal quick-release drill chuck
- Ergonomic design
- Handle with Softgrip covering
- Robust metal gearbox
- **Supplied with** 4 m power cable, 10 mm FIXTEC metal quick-release drill chuck, additional handle

781007 0003

DE 13 RP
- Powerful and compact 13 mm power drill
- Electronics with speed pre-selection
- Planetary gearing for high torque up to 59 Nm
- Clockwise / anticlockwise rotation
- 13 mm metal quick-release drill chuck
- Handle with Softgrip covering
- **Supplied with** 4 m power cable, 13 mm metal quick-release drill chuck, additional handle with drilling depth stop, complete case

781007 0004

model	Output W	Torque N-m	Drill Ø steel/ aluminium/wood mm	Rotational speed r/min	Clamping range mm	Weight kg	art.no.	€
DE 10 RX	630	21	10 / 13 / 30	0 - 2,700	1.0 - 10	1.6	**781007** 0003	109,–
DE 13 RP	630	59	13 / 16 / 40	0 - 950	1.5 - 13	2.1	781007 0004	199,–

7165

Milwaukee Rotary hammer drills

3 year warranty and 1 year full service if registered at www.milwaukeetool.de

PFH 26

- Compact and handy rotary hammer for drilling up to 26 mm in concrete
- SDS-plus drill chuck
- Electronics with speed control
- Locking switch for continuous operation
- Clockwise/anticlockwise rotation and percussion stop for drilling and screwing
- Anti-vibration design and handles with Softgrip covering reduce vibrations and offer maximum user comfort
- Integrated metal block (IMB) for maximum stability and extreme durability
- Safety clutch protects the user and drill if the bit becomes jammed
- **Supplied with** 4 m power cable, additional handle with depth stop, carry case

781001 0004

PH 28 X

- Powerful combi-hammer with FIXTEC for drilling up to 28 mm in concrete
- SDS-plus drill chuck
- FIXTEC quick-release tool changing system for swapping adapters and drill chucks quickly with no tools required
- Idling speed limiter protects the motor and gears to ensure greater durability
- Locking switch for continuous operation
- Clockwise/anticlockwise rotation and percussion stop for drilling and screwing
- Rotation stop for light chiselling work
- Anti-vibration design and handles with Softgrip covering reduce vibrations and offer maximum user comfort
- Integrated metal block (IMB) for maximum stability and extreme durability
- Safety clutch protects the user and drill if the bit becomes jammed
- **Supplied with** 4 m power cable, FIXTEC adapter, 13 mm quick-release drill chuck, additional handle with drilling depth stop, carry case

781001 0005

PLH 28 XE

- Powerful and compact combi-hammer for drilling up to 28 mm in concrete
- FIXTEC quick-release tool changing system / SDS-plus drill chuck
- Electronics with speed and percussion rate control, overload protection and idling speed limiter
- Clockwise/anticlockwise rotation for drilling and screwing
- Percussion stop for drilling in wood and metal
- Rotation stop for light chiselling work
- Soft-hammer function
- AVS anti-vibration system
- Handle with Softgrip covering
- Safety clutch - protects the user and drill if the bit becomes jammed
- **Supplied with** 4 m power cable, FIXTEC adapter and 13 mm quick-release drill chuck, additional handle with drilling depth stop, carry case

781001 0007

model	Output W	Impact energy J	Drill Ø concrete/ steel/wood mm	Rotational speed r/min	Load impact count b/min	Weight kg	art.no.	€
PLH 28 XE	725	2.4	26 / 13 / 30	0 - 1,250	0 - 4,500	2.4	**781001** 0004	179,–
PH 28 X	820	3.3	28 / 13 / 30	0 - 900	0 - 4,000	2.9	781001 0005	249,–
PLH 28 XE	800	4.8	28 / 13 / 40	0 - 1,500	0 - 4,000	3.6	781001 0007	379,–

7165

AEG Hammer drill

ERGOMAX universal hammer drill

- 750 Watt motor for demanding applications
- High torque up to 58 Nm due to 2-speed planetary gearing
- FIXTEC metal quick-release drill chuck with spindle lock for changing tools quickly and easily
- Electronics with speed and percussion rate control
- Clockwise/anticlockwise rotation and percussion stop for drilling and screwing
- Direct bit attachment in the spindle
- Removable main handgrip for optimum machine handling
- **Supplied with** carry case, 4 m power cable, 13 mm FIXTEC metal quick-release drill chuck, additional handle with drilling depth stop

model	Output W	Torque N-m	Drill Ø concrete/ steel/wood mm	Rotational speed 1st gear/2nd gear r/min	Clamp width mm	Weight kg	art.no.	€
ERGOMAX	750	max. 58	20 / 13 / 40	0 - 1,200 / 0 - 3,400	1.5 - 13	2.6	**780003** 0006	179,–

7158

AEG Cordless screwdriver

BS12C2 2.0Ah PRO Li-Ion cordless drill driver

- Extremely handy: just 168 mm long
- 10 mm FIXTEC quick-release drill chuck with spindle lock
- Electronics with speed control and overload protection
- 17 torque settings plus drilling level
- Clockwise/anticlockwise rotation for drilling and screwing
- LED workspace lighting
- Robust metal gearbox
- Handle with Softgrip covering
- PRO lithium ion batteries with overload protection
- **Supplied with** carry case, 2x 12 V / 2.0 Ah PRO lithium ion batteries, LL1230 quick-charging unit, 10 mm FIXTEC quick-release chuck

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Clamping range mm	Drill Ø steel/ wood mm	Weight kg	art.no.	€
BS 12C2	12	2.0	0-350 / 0-1.500	34	1.0 - 10.0	10 / 20	1.2	**780008** 0014	149,–
								7158	

SE3.6 cordless drill driver

- Articulated joint for working in gun form
- 10 pre-select torque settings with additional drilling level
- 1/4" hex bit holding fixture
- Clockwise/anticlockwise rotation
- Robust fully insulated metal gearbox
- Ergonomic folding handle with Softgrip covering
- **Supplied with** carry case, 2x 3.6 V NiCd batteries, quick-charging unit

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Weight kg	art.no.	€
SE 3.6	3.6	1.5	200 / 600	4.5 / 6.5	0.6	**780008** 0021	99,–
						7158	

BS14G2 cordless drill driver

- Handy and powerful 14 V cordless drill driver
- Electronics with speed control
- 32 Nm for powerful performance
- 23 torque settings plus drilling level
- Robust quick-release drill chuck with spindle lock for quick and easy
- tool changes
- Clockwise/anticlockwise rotation for drilling and screwing
- Handle with Softgrip covering
- **Supplied with** 2x 14.4 V / 1.4 Ah NiCd batteries, charger, 10 mm quick-release drill chuck, carry case

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Clamping range mm	Drill Ø steel/ wood mm	Weight kg	art.no.	€
BS 14G2	14.4	1.4	0 - 400 / 0 - 1,400	32	1.5 - 10	10 / 32	2.0	**780008** 0008	109,–
								7158	

BS18G2 cordless drill driver

- Handy and powerful 18 V cordless drill driver, just 203 mm long
- Electronics with speed control
- 23 torque settings plus drilling level
- Robust FIXTEC metal quick-release drill chuck with spindle lock for quickly and easily changing tools
- Clockwise/anticlockwise rotation for drilling and screwing
- LED workspace lighting
- Handle with Softgrip covering
- PRO lithium ion batteries with overload protection and charge status indicator
- **Supplied with** 2x 18 V / 1.5 Ah PRO lithium ion batteries, quick-charging unit, 13 mm FIXTEC metal quick-release drill chuck, double-blade bit, carry case

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Clamping range mm	Drill Ø steel/ wood mm	Weight kg	art.no.	€
BS 18G2	18	1.5	0 - 400 / 0 - 1,500	47	1.5 - 13	13 / 34	1.7	**780008** 0009	179,–
								7158	

BS 18C PRO Li-Ion cordless compact drill driver

- Powerful 18 V cordless compact drill driver
- 4-pole motor for maximum output with a compact design
- Electronics with speed control
- 23 torque settings plus drilling level
- Robust FIXTEC quick-release drill chuck with spindle lock for quickly and easily changing tools
- Clockwise/anticlockwise rotation for drilling and screwing
- LED workspace lighting
- Handle with Softgrip covering
- PRO lithium ion batteries with overload protection and charge status indicator
- **Supplied with** carry case, 2x 18 V PRO lithium ion batteries, BL1218 quick-charging unit, 13 mm FIXTEC quick-release drill chuck, additional handle, double-blade bit

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Clamping range mm	Drill Ø steel/ wood mm	Weight kg	art.no.	€
BS 18C	18	2.0	0-450 / 0-1.650	60	1.5 - 13.0	13 / 45	1.7	**780008** 0015	219,–
BS 18C	18	4.0	0-450 / 0-1.650	70	1.5 - 13.0	13 / 45	2.0	780008 0016	279,–
								7158	

Cordless screwdriver

3 year warranty and 1 year full service if registered at www.milwaukeetool.de

M12BD cordless compact drill driver

- 2-speed compact screwdriver, small and handy, even in confined spaces
- Extremely handy: just 175 mm long
- REDLINK™ electronic overload protection to prolong the battery, motor and gearing service life
- Single cell monitoring for long battery life
- Optimised handle with Softgrip covering for the best ergonomics and grip
- ¼" hex bit direct holding fixture
- 19 torque settings with additional drilling level for cleanly sinking screws
- LED workspace lighting
- Battery charge status indicator
- 100 % compatible with the Milwaukee® M12 product range
- **Supplied with** 2x 12 V Red lithium-ion batteries, C12 C quick-charging unit, bit, carry case

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Holding fixtures	Drill Ø steel/ wood mm	Weight kg	art.no.	€
M12 BD	12	2.0	0-400 / 0-1.500	30	1/4" hex	10 / 22	1.0	**781008** 0010	139,–
								7165	

M12BDD cordless compact drill driver

- Extremely handy: just 185 mm long
- REDLINK™ electronic overload protection to prolong the battery, motor and gearing service life
- Single cell monitoring for long battery life
- Optimised handle with Softgrip covering for the best ergonomics and grip
- 10 mm FIXTEC metal quick-release drill chuck with spindle lock
- 19 torque settings with additional drilling level for cleanly sinking screws
- LED workspace lighting
- Battery charge status indicator
- 100 % compatible with the Milwaukee® M12 product range
- **Supplied with** 2x 12 V Red lithium-ion batteries, 10 mm FIXTEC metal quick-release drill chuck, C12 C charging unit, bit, HD box

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Clamping range mm	Drill Ø steel/ wood mm	Weight kg	art.no.	€
M12 BDD	12	2.0	0-400 / 0-1.500	30	1.0 - 10.0	10 / 22	1.2	**781008** 0011	159,–
								7165	

M18BDD cordless drill driver

- Extremely handy: just 185 mm long
- 4-pole motor for maximum output with a compact design
- REDLINK™ electronic overload protection to prolong the battery, motor and gearing service life
- Electronics with infinitely variable speed control
- 17 torque settings + drilling level
- Clockwise/anticlockwise rotation
- 13 mm FIXTEC metal quick-release drill chuck with spindle lock
- Robust metal gearbox for a long service life
- Handle with Softgrip covering for maximum user comfort
- LED workspace lighting
- Battery charge status indicator
- **Supplied with** 2x 18 V Red lithium-ion batteries, M12-18C charging unit, belt clip, bit holder, bit, HD box

781008 0418

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Clamping range mm	Drill Ø steel/ wood mm	Weight kg	art.no.	€
M18 BDD	18	2.0	0-450 / 0-1.800	50	1.5 - 13.0	13 / 38	1.8	**781008** 0318	249,–
M18 BDD	18	4.0	0-450 / 0-1.800	60	1.5 - 13.0	13 / 38	2.0	781008 0418	319,–
								7165	

M18 CDD cordless drill driver

- **New generation 18 V FUEL™ compact drill driver generation**
- **Brushless POWERSTATE™ motor for up to 10x longer motor life**
- **RED LITTHIUM ION™ batteries for up to 2.5x longer run time**
- **REDLINK PLUS™ electronics for up to 2x more power**
- Single cell monitoring for long battery life
- 2-speed gearbox for a powerful 70/80 Nm of torque
- 24 torque settings
- Spindle lock for quick (drill) bit changes
- Clockwise/anticlockwise rotation for drilling and screwing
- Robust metal gearbox for a long service life
- Handle with Softgrip covering for maximum user comfort
- LED workspace lighting
- Battery charge status indicator
- Supplied with 2x 18 V Red lithium-ion batteries, M12-18C charging unit, 13 mm FIXTEC metal quick-release drill chuck with spindle lock, belt clip, HD box

Up to 5.0 Ah cordless screwdriver

model	Tension V	Battery capacity A-h	Rotational speed 1st gear/2nd gear r/min	Torque N-m	Clamping range mm	Drill Ø steel/ wood mm	Weight kg	art.no.	€
M18 CDD	18	2.0	0-550 / 0-1.850	70	1.5 - 13	13 / 45	2.0	**781010** 0318	329,–
M18 CDD	18	5.0	0-550 / 0-1.850	80	1.5 - 13	13 / 50	2.3	781010 0518	419,–
								7165	

AEG Angle grinder

WS 9-115
- One-handed angle grinder
- Powerful 900 Watt motor
- Flat and robust metal gearbox for working in areas that are hard to access
- Dust-protected motor and optimised cooling system for a long service life
- AVS handle with Softgrip covering for maximum user comfort
- Safety guard can be adjusted quickly without tools
- **Supplied with** additional AVS handle, safety guard, tools for changing saw blades, flange nut, flange

FIXTEC clamping nut

780013 0002

WS 12-125 XE
- One-handed angle grinder
- Powerful 1,200 Watt motor
- Constant electronic feedback with idling speed limiter and overload protection
- Flat and robust metal gearbox for working in areas that are hard to access
- Dust-protected motor and optimised cooling system for a long service life
- Safety guard can be adjusted quickly without tools
- Patented FIXTEC quick-release clamping nut to allow discs to be changed quickly and easily
- AVS handle with Softgrip covering for maximum user comfort
- **Supplied with** additional AVS handle, safety guard, flange nut, tools for changing saw blades, FIXTEC nut

780013 0004

WSE 14-125 MX
- Compact 2-handed angle grinder
- Powerful 1,450 Watt motor
- DIGITRONIC® electronics with speed pre-selection, soft-start, overload protection and idling speed limiter
- Patented FIXTEC quick-release clamping nut to allow discs to be changed quickly and easily
- Automatic cut-off carbon brushes, easy to replace
- Flat gear head to ensure a clear view of the workpiece and optimise the cutting depth
- High level of protection from abrasive dusts thanks to epoxy resin coating on the field and rotor
- Snap-in safety guard quickly adjusted at the push of a button
- Safety spindle lock
- Safety switch
- **Supplied with** 4 m power cable, additional handle, FIXTEC nut, safety guard, flange nut, carry case

780013 0006

model	Output W	Rotational speed r/min	Cutting depth max. mm	Washer Ø mm	Weight kg	art.no.	€
WS 9-115	900	11,000	28	115	2.0	**780013** 0002	69,–
WS 12-125 XE	1,200	2,800 - 11,000	33	125	2.3	780013 0004	139,–
WSE 14-125 MX	1,450	2,600 - 11,000	33	125	2.5	780013 0006	229,–

7158

HEDI Power socket strip, IPX4

- 6-socket Schuko power strip, black, with switch
- Splash-proof, protection rating IPX4
- Approx. 1.3 m connection lead, H07RN-F3G1.5

Description	art.no.	€
6-socket power strip	**770008** 0001	*22,20*

7157

HEDI Socket distributor

- Casing made from fully insulated and shock-proof plastic/rubber
- 10 kW output at a simultaneity factor of 0.5 - 0.7
- Protection rating IPX4

HEDI e.STATION suspended distributor
- Hanging eyes, 2 m knotted link chain, tool hook

Description	B mm	H mm	T mm	art.no.	€
6 Schuko power sockets, IPX4; 2 CEE power sockets, 16 A / 400 V	227	305	212	**774006** 0001	86,90
6 Schuko power sockets, IPX4; 1 CEE power socket, 16 A / 400 V; 2 compressed air outlets	227	305	212	774006 0002	134,–

7157

Angle grinder

3 year warranty and 1 year full service if registered at www.milwaukeetool.de

Cutting discs and grinding wheels start on page 60-27

AG 10-125
- Compact and handy 1,000 Watt / 125 mm angle grinder
- Extremely compact design: just 276 mm long
- Safety guard quickly adjusted at the push of a button
- Spindle lock for quickly replacing discs
- **Supplied with** 4 m power cable, safety guard, additional handle, clamp set

AG 12-125X
- Compact and handy 1,000 Watt / 125 mm angle grinder
- Dust-protected ProTector motor for a long service life
- Integrated FIXTEC quick-release system allowing discs to be changed quickly without tools
- L-shaped ventilation opening prevents grinding dust from being drawn in
- Safety guard quickly adjusted
- **Supplied with** 4 m power cable, safety guard, additional handle

781013 0004

AGV 22-180 E and AGV 22-230 E
- Powerful 2,200 Watt angle grinder
- Soft-start and restart protection
- Compact design: just 485 mm long
- Spindle lock for quickly replacing discs
- Flat and robust metal gearbox for working in areas that are hard to access
- Safety guard quickly adjusted at the push of a button
- 2-position additional AVS handle
- Cut-off carbon brushes to protect the motor
- Cover flaps for changing carbon brushes easily
- **Supplied with** 4 m power cable, safety guard, additional AVS handle, clamp set

781013 1012

AGVM 26-230 GEX
- Disc diameter 230 mm
- Dust-protected motor with start-up current limitation and restart lock
- Spindle lock
- Rotatable handle with vibration damping
- Up to 70 % less vibration
- Flat and robust metal gearbox for working in areas that are hard to access
- Snap-in safety guard adjustment at the push of a button
- B-GUARD safety clutch
- FIXTEC clamping nut for changing discs quickly without the need for tools
- **Supplied with** 4 m power cable, safety guard, additional AVS handle and FIXTEC clamping nut

781013 1212

781013 2223

model	Output W	Rotational speed r/min	Cutting depth max. mm	Washer Ø mm	Weight kg	art.no.	€
AG 10-125	1,000	11,000	33	125	2.1	**781013** 1012	89,–
AG 12-125 X	1,200	11,000	33	125	2.4	781013 1212	119,–
AGV 22-180 E	2,200	8,500	43	180	5.2	781013 2218	*149,–*
AGV 22-230 E	2,200	6,600	68	230	5.4	781013 2223	149,–
AGVM 26-230 GEX	2,600	6,600	68	230	5.8	781013 0004	*329,–*

7165

FIXTEC nut

- FIXTEC: Change discs in a matter of seconds, no tools required
- Only 8 mm thick, allowing a greater grinding surface on the material
- Integrated safety clutch to protect users
- Fits all angle grinders with standard M14 spindle holding fixtures

model	appropriate for	art.no.	€
FIXTEC nut	Angle grinder with up to 230 mm cutting disc diameter	**780045** 0001	23,80

7165

Safety in the workplace

Please protect your eyes, ears and respiratory system!

Milwaukee Offset screwdriver attachment

- 1/4" hex holding fixture and 10 mm hex holding fixture for better grip in larger drill chucks for heavy-duty applications
- Magnetic
- 90° angled head
- Suitable for all standard bits
- Metal gears and housing
- Handle rotates through 360° and can be adjusted for any application
- Industrial quality, suitable for cordless tools up to 40 V

model	appropriate for	art.no.	€
OSD 2	Applications up to 40 Nm torque and a max. speed of 1,750 rpm	**780040** 0001	69,90

7165

AEG Straight grinder

GS 500 E straight grinder

- Powerful 500 Watt motor
- Electronics with speed pre-selection
- Short, compact design
- With 43 mm spindle neck, can also be used in a drill stand
- Robust metal gearbox housing with double spindle bearing for maximum precision
- ERGO safety cut-off
- **Supplied with** 6 mm collet and 15 / 17 AF chuck key

Burr cutters and grinding points start on page 60-10

780021 0001

GSL 600 E straight grinder

- Powerful 600 Watt motor
- Electronics with speed pre-selection
- Extra-long grinding spindle and narrow gear neck for working on areas that are difficult to access
- Robust metal gearbox housing with double spindle bearing for maximum precision
- ERGO safety cut-off
- **Supplied with** 6 mm collet and 15 / 17 AF chuck key

780021 0002

model	Output W	Rotational speed r/min	Collet Ø mm	Weight kg	art.no.	€
GS 500 E	500	10,000 - 29,000	6	1.3	**780021** 0001	219,–
GSL 600 E	600	10,000 - 29,000	6	1.9	780021 0002	339,–

7158

AEG Hot air gun

HG 600 VK hot air gun set

- Light and handy electronic hot air gun, e.g. for removing old paint, soldering, plastic forming, hot adhesive applications
- Powerful 2,000 Watt heating output for the toughest challenges
- Electronics with infinitely variable 90° - 600° temperature control
- Non-slip base for stationary use
- **Supplied with** power cable, spot nozzle, reflector nozzle, round jet nozzle, carry case

model	Output W	Air consumption l/min	Temperature control °C	Weight kg	art.no.	€
HG 600 VK	2,000	300 / 500	90 - 600	0.6	**780018** 0003	89,–

7158

Compact Line

C-Line

- Affordable
- High-quality
- In 11 different colours

EUROBOOR Magnetic core drills

- Powerful motors
- **ECO32 and ECO50 with clockwise rotation**
- **ECO100/4 with clockwise and anti-clockwise rotation for thread cutting (M3 - M30)**
- Extremely high magnetic force for safe work
- Large travel range
- **Supplied with:** Safety goggles, work gloves, chain, cutting oil and cutting oil container
- Product may differ from image shown

ECO32 in a carry case (black), fixed Weldon 19.05 mm tool holding fixture
ECO50 in a carry case (black), replaceable MT2 / Weldon 19.05 mm tool holding fixture with automatic internal lubrication
ECO100/4 in a trolley case (blue), replaceable MT3 / Weldon 19.05 mm tool holding fixture with automatic internal lubrication

782001 0032

782001 0050

782001 0100

782001 0100

782001 0032

model	Length mm	Width mm	Output W	Rotational speed r/min	Lift mm	Description	Twist drill Ø mm	Weight kg	Magnetic foot L x W x H mm	Retention force N	art.no.	€
ECO.32	255	110	1000	775	150	For core drill bits: Ø 12 - 32 mm	1-13	12	160 x 80 x 42	1500	**782001** 0032	625,–
ECO.50	245	160	1250	380 / 690	170	For core drill bits: Ø 12 - 50 mm	1-23	13.5	170 x 85 x 48	1850	782001 0050	925,–
	365	190	1900	42-110 / 65-190 / 140-400 / 220-620	260	For core drill bits: Ø 12 - 100 / 61 - 100 mm / for taps: M3 - M30	1-31.75	28	230 x 100 x 64	3000	782001 0100	1.425,–

7155

MAKRA KEG edge deburring tool

- Developed for direct use with chip-removing machine tools
- Ideally suited to conventional edge deburring work
- End mills cut lengthways along the edges, which prevents secondary burr formation
- 1,050 W milling motor with double bearing milling spindle (KEG 500 = 1,500 W with triple bearing milling spindle)
- Solid shaft control electronics
- Steel clamping flange, standard Ø = 43 mm (KEG 500 Ø = 60 mm)
- **Supplied** with chip collecting tray, set of hardened steel guideways, collet, clamping nut, operating tools, user manual
- Suitable milling cutters:
  Universal milling cutters for steel, cast iron and short-chip non-ferrous metals Ø 8 mm, 2540090080; Ø 12 mm, 2540090120
  For aluminium and plastics Ø 8 mm, 2515090080; Ø 12 mm 2515090120
  For stainless steel and heat-resistant steel Ø 8 mm, 252040 0080; Ø 12 mm, 252040 0120

776001 1150

Foot switch for working quickly and minimising motor use (optional)

Machine time can be used for chamfering and deburring

Infinitely variable chamfer size settings

Hobbing procedure guarantees precise deburring

Chip collecting tray is included

model	Guide rail W x L mm	Output W	Rotational speed r/min	Collet Ø mm	Weight kg	art.no.	€
KEG 150	40 x 150	1,050	3,500 - 30,000	8	5.6	**776001** 1150	829,–
KEG 300	40 x 290	1,050	3,500 - 30,000	8	6.8	776001 0300	1.029,–
KEG 400	40 x 400	1,050	3,500 - 30,000	8	9.0	776001 0400	1.269,–
KEG 500	70 x 500	1,500	2,500 - 14,000	12	20.0	776001 0500	2.549,–

7156

Foot switch

Description	Cable length m	art.no.	€
Foot switch with appliance socket (max. 3,000 W)	5	**776010** 0001	298,50

7156

FLOTT Werkzeugmaschinen Bench drill

- Prices ex works, excluding packaging

TB 13 Plus bench drill

- OLED lighting
- Emergency stop button
- Drilling protection with electronic circuit breaker
- Infinitely variable speed control
- Spindle stop not required
- **Drilling depth max. 60 mm, thread cutting capacity max. M8**
- Digital speed and drilling depth display (target and actual)
- Choice of operating modes: drilling and thread cutting
- Connection cable with plug (1.2 m)
- Usable table surface, width x length 300 x 250 mm
- Distance between spindle and working surface 0 - 350 mm

Design	Dimensions W x D x H mm	Motor output kW	Rotational speed r/min	Projection mm	Column Ø mm	Weight kg	art.no.	€
With B16 quick-release drill chuck	400 x 520 x 850	0.54	40 - 4,000	220	70	62	**783002** 0013	2.250,–
With MT2 taper mandrel	400 x 520 x 850	0.54	40 - 4,000	220	70	62	783002 0213	2.400,–

7169

TB P18 ST bench drill

- **With MT2 taper mandrel**
- Rapidly adjustable drilling depth stop
- Emergency stop button, undervoltage trip device and thermal overload protection
- Drilling protection with electronic circuit breaker
- Infinitely variable speed control, levels are changed by moving a belt
- **Drilling depth max. 95 mm, thread cutting capacity max. M10**
- Connection cable with CEE plug (1.5 m)
- Usable table surface, width x length 300 x 250 mm
- Distance between spindle and working surface 0 - 350 mm

Dimensions W x D x H mm	Motor output kW	Rotational speed level 1/ level 2 r/min	Projection mm	Column Ø mm	Weight kg	art.no.	€
415 x 655 x 860	0.45 / 0.75	100-1.200 / 350-4.200	200	70	75	**783003** 0218	3.260,–

7169

FLOTT Werkzeugmaschinen Pillar drill

- Prices ex works, excluding packaging

SB M3 ST pillar drill

- Infinitely variable speed control
- Emergency stop button
- Manual reverser switch for clockwise and anti-clockwise rotation
- Undervoltage trip device
- Rack for altering table height
- Drilling depth stop with fine adjustment
- Connection cable with CEE plug (1.5 m)
- Drilling protection with electrical circuit breaker
- Thermal overload protection
- **Drilling depth max. 125 mm, thread cutting capacity max. M20**
- Usable table surface, width x length 420 x 340 mm
- Distance between spindle and working surface 240 - 790 mm

Dimensions W x D x H mm	Motor output kW	Rotational speed level 1/ level 2 r/min	Projection mm	Column Ø mm	Weight kg	art.no.	€
520 x 820 x 1,900	0.90 / 1.45	125-2.000 / 250-4.000	280	110	275	**783004** 0001	4.750,-

7169

FLOTT Werkzeugmaschinen Double-end grinder

- Prices ex works, excluding packaging

Grinding wheels
page 60-38

TS 200/250/300 SD P double-end grinder

- Smooth, maintenance-free motor
- Safety cover with enclosed sides
- Robust adjustable workpiece supports
- Adjustable workpiece supports for a high degree of safety and comfort
- Adjustable spark deflector for a high degree of safety and comfort
- **Suitable for grinding, deburring and sharpening tools of all types, metal profiles, etc.**
- Circuit breaker and undervoltage trip device
- Supplied with spark shields/eye protection for both sides; connection cable with CEE plug, 16 A; coarse and fine grinding wheels, 1 of each
- **Also available with machine stand, emergency stop button and extractor on request**

model	Description	Motor output kW	Rotational speed r/min	Weight kg	art.no.	€
TS 200 SD P	For grinding wheels, width x depth x height: 200 x 32 x 32 mm	1.0	2,550	20	**783020** 0200	560,–
TS 250 SD P	For grinding wheels, width x depth x height: 250 x 40 x 51 mm	1.4	1,400	32	783020 0250	760,–
TS 300 SD P	For grinding wheels, width x depth x height: 300 x 40 x 51 mm	2.2	1,250	40	783020 0300	1.340,–

7169

FLOTT Werkzeugmaschinen Belt grinder

- Prices ex works, excluding packaging

Abrasive belts
page 60-27

BSM 75/150 belt grinder

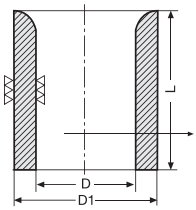
- High-quality design
- Convex drive roller (which automatically centres the abrasive belt on the roller), fully vulcanised for a longer service life and optimum smoothness
- Abrasive belt can be changed quickly and easily without tools
- Infinitely variable height adjustment allows the belt grinder to be set up ideally for each user, with additional locking mechanism and an extended setting range
- Freely adjustable metal stop to ensure safe and optimum control of workpieces when using the large surface grinding area
- Surface grinding area 500 mm
- Design-optimised belt speed to largely rule out the possibility of workpieces burning during machining
- Equipped with a CEE plug featuring a single phase reversal facility
- **Also available with extractor on request**
- Delivery includes: 60 grain abrasive belt and connection cable with CEE plug, 16 A (1.5 m)

model	Motor output kW	Dimensions W x D x H mm	Belt dimensions L x W mm	Weight kg	art.no.	€
BSM 75	3.75	950 x 430 x 1,050	2,000 x 75	85	**783021** 0075	1.110,–
BSM 150	3.75	950 x 430 x 1,050	2,000 x 150	100	783021 0150	1.550,–

7099

Cylindrical drill guide bushes, type A

DIN 179 A



- **Type A,** bore rounded at one end
- Hardened special steel, ground inside and outside to a high level of tolerance compliance
- Hardness 62 HRc
- Tolerances: D = F7, D1 = n6
- Bore D increasing in 0.1 mm increments

- Intermediate dimensions, sizes above 26.0 mm, type D versions and type B versions with bores rounded at both ends are available on request

- **Please specify nominal dimension D in mm, as a four digit figure!**
  (e.g. 3.60 mm = 0360; 15.10 mm = 1510)

Short

D mm	D1 mm	L mm		734501.... €
1,9 - 2,6	5	6	10	1,85
2,7 - 3,3	6	8	10	1,90
3,4 - 4	7	8	10	2,–
4,1 - 5	8	8	10	2,05
5,1 - 6	10	10	10	2,10
6,1 - 8	12	10	10	2,30
8,1 - 10	15	12	10	2,55
10,1 - 12	18	12	10	2,90
12,1 - 15	22	16	5	3,20
15,1 - 18	26	16	5	4,–
18,1 - 22	30	20	5	5,25
22,1 - 26	35	20	5	6,25

7171

Medium

D mm	D1 mm	L mm		734502.... €
1,9 - 2,6	5	9	10	2,–
2,7 - 3,3	6	12	10	2,05
3,4 - 4	7	12	10	2,10
4,1 - 5	8	12	10	2,20
5,1 - 6	10	16	10	2,40
6,1 - 8	12	16	10	2,60
8,1 - 10	15	20	10	3,–
10,1 - 12	18	20	10	3,45
12,1 - 15	22	28	5	4,30
15,1 - 18	26	28	5	5,30
18,1 - 22	30	36	5	6,80
22,1 - 26	35	36	5	7,90

7171

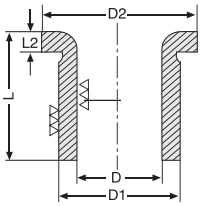
Long

D mm	D1 mm	L mm		734503.... €
2,7 - 3,3	6	16	10	3,15
3,4 - 4	7	16	10	3,05
4,1 - 5	8	16	10	3,15
5,1 - 6	10	20	10	3,45
6,1 - 8	12	20	10	3,70
8,1 - 10	15	25	10	4,30
10,1 - 12	18	25	10	4,65
12,1 - 15	22	36	5	5,85
15,1 - 18	26	36	5	6,70
18,1 - 22	30	45	5	10,80
22,1 - 26	35	45	5	11,55

7171

Drill guide collar bushes, type A

DIN 172 A



- **Type A,** bore rounded at one end
- Hardened special steel, ground inside and outside to a high level of tolerance compliance
- Hardness 62 HRc
- Tolerances: D = F7, D1 = n6
- Bore D increasing in 0.1 mm increments

- Intermediate dimensions, versions with D over 26.0 mm, and type B versions with bores rounded at both ends are available on request

- **Please specify nominal dimension D in mm, as a four digit figure!**
  (e.g. 3.60 mm = 0360; 15.10 mm = 1510)

Short

D mm	D1 mm	D2 mm	L2 mm	L mm		734505.... €
1,9 - 2,6	5	8	2,0	6	10	2,55
2,7 - 3,3	6	9	2,5	8	10	2,55
3,4 - 4	7	10	2,5	8	10	2,65
4,1 - 5	8	11	2,5	8	10	2,80
5,1 - 6	10	13	3,0	10	10	2,80
6,1 - 8	12	15	3,0	10	10	3,20
8,1 - 10	15	18	3,0	12	10	3,45
10,1 - 12	18	22	4,0	12	10	3,90
12,1 - 15	22	26	4,0	16	5	4,55
15,1 - 18	26	30	4,0	16	5	5,40
18,1 - 22	30	34	5,0	20	5	7,15
22,1 - 26	35	39	5,0	20	5	9,05

7171

Medium

D mm	D1 mm	D2 mm	L2 mm	L mm		734506.... €
1,9 - 2,6	5	8	2,0	9	10	2,70
2,7 - 3,3	6	9	2,5	12	10	2,80
3,4 - 3,5	7	10	2,5	12	10	2,80
3,6 - 4	7	10	2,5	12	1	2,80
4,1 - 4,3	8	11	2,5	12	1	2,95
4,4 - 5	8	11	2,5	12	10	2,95
5,1 - 6	10	13	3,0	16	10	3,15
6,1 - 8	12	15	3,0	16	10	3,45
8,1 - 10	15	18	3,0	20	10	3,90
10,1 - 12	18	22	4,0	20	10	4,35
12,1 - 15	22	26	4,0	28	5	5,85
15,1 - 18	26	30	4,0	28	5	7,15
18,1 - 22	30	34	5,0	36	5	9,45
22,1 - 26	35	39	5,0	36	5	11,45

7171

Long

D mm	D1 mm	D2 mm	L2 mm	L mm		734507.... €
2,7 - 3,3	6	9	2,5	16	10	4,65
3,4 - 4	7	10	2,5	16	10	4,45
4,1 - 5	8	11	2,5	16	10	4,70
5,1 - 6	10	13	3,0	20	10	5,10
6,1 - 8	12	15	3,0	20	10	5,25
8,1 - 10	15	18	3,0	25	10	6,10
10,1 - 12	18	22	4,0	25	10	6,60
12,1 - 15	22	26	4,0	36	5	8,95
15,1 - 18	26	30	4,0	36	5	9,25
18,1 - 22	30	34	5,0	45	5	12,70
22,1 - 26	35	39	5,0	45	5	15,30

7171

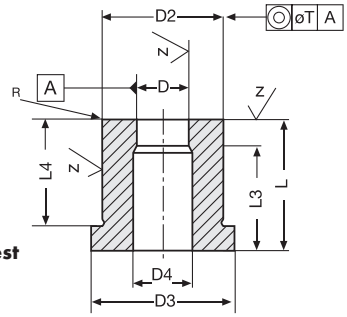
Cutting bushes, type B

HSS | DIN 9845B | B

- **Type B**, bore rounded at both ends
- Hardened and tempered HSS, ground inside and outside to a high level of tolerance compliance
- Hardness 58 - 62 HRc
- Tolerances: D = H8, D2 = k6
- D increasing in 0.1 mm increments

- **Intermediate dimensions, larger diameters and type A available on request**

- **Please specify nominal dimension D in mm, as a four digit figure!**
  (e.g. 3.60 mm = 0360; 15.10 mm = 1510)



Short

D mm	D2 mm	T mm	D3 mm	D4 mm	L mm	L3 mm	L4 mm	**734515....** €
1	5	0,01	7	D + 0,3	20	18	16	*16,35*
1,1 - 2	6	0,01	8	D + 0,3	20	17	16	*10,95*
2,1 - 3	7	0,01	9	D + 0,5	20	17	16	*9,25*
3,1 - 4	8	0,01	10	D + 0,5	20	17	16	*9,25*
4,1 - 5	10	0,01	12	D + 0,7	20	16	16	*9,25*
5,1 - 6	12	0,02	14	D + 0,7	20	16	16	*9,25*
6,1 - 8	15	0,02	17	D + 0,7	20	16	16	*10,–*
8,1 - 10	18	0,02	20	D + 1,0	20	16	16	*11,05*
10,1 - 12	22	0,02	24	D + 1,0	20	15	16	*11,50*
12,1 - 15	26	0,02	28	D + 1,0	20	15	16	*15,25*
								7171

Long

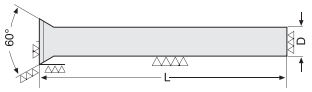
D mm	D2 mm	T mm	D3 mm	D4 mm	L mm	L3 mm	L4 mm	**734516....** €
1	5	0,01	7	D + 0,3	28	26	24	*18,90*
1,1 - 2	6	0,01	8	D + 0,3	28	25	24	*14,35*
2,1 - 3	7	0,01	9	D + 0,5	28	25	24	*11,65*
3,1 - 4	8	0,01	10	D + 0,5	28	25	24	*11,65*
4,1 - 5	10	0,01	12	D + 0,7	28	24	24	*11,65*
5,1 - 6	12	0,02	14	D + 0,7	28	24	24	*11,65*
6,1 - 8	15	0,02	17	D + 0,7	28	24	24	*12,55*
8,1 - 10	18	0,02	20	D + 1,0	28	24	24	*13,30*
10,1 - 12	22	0,02	24	D + 1,0	28	23	24	*14,05*
12,1 - 15	26	0,02	28	D + 1,0	28	23	24	*18,40*
15,1 - 18	30	0,02	32	D + 1,0	28	23	24	*23,20*
								7171

Precision punch, type D, HSS

HSS | DIN 9861

- **Type D**
- Hardened and tempered HSS; hot-formed head further tempered after rounding
- Shank and head plunge-ground and lapped
- Hardness: Shank 62 - 66 HRc, head 45 - 55 HRc
- D increasing in 0.1 mm increments up to Ø 25.00 mm
- Tolerance h6

- **Please specify nominal dimension D in mm, as a four digit figure!**
  (e.g. 3.60 mm = 0360; 15.10 mm = 1510)



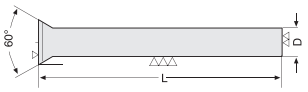
D mm	**734001.... L= 71 mm** €	**734002.... L= 80 mm** €	**734003.... L= 100 mm** €	**734004.... L= 130 mm** €
1,0 - 1,9	*2,60*	*2,95*	**3,65**	
2,0 - 3,0	*2,55*	*2,85*	**3,50**	
3,1 - 4,0	*2,65*	*3,05*	**3,85**	*5,50*
4,1 - 5,0	*3,05*	*3,40*	**4,20**	*6,40*
5,1 - 6,0	**3,25**	*3,55*	**4,45**	*7,20*
6,1 - 7,0	*3,85*	*4,30*	**5,–**	*7,45*
7,1 - 7,9	*4,–*	**4,45**	*5,65*	**8,–**
8,0	*4,–*	*4,45*	*5,65*	*8,–*
8,1 - 8,9	*4,75*	*5,20*	*6,20*	*9,30*
9,0	*4,75*	*5,20*	*6,20*	*9,30*
9,1 - 10,0	*5,40*	*5,95*	**7,20**	*10,20*
10,1 - 10,4	*6,55*	*7,10*	*8,95*	*13,40*
10,5	*5,85*	**6,40**	**8,–**	**12,40**
	7170	7170	7170	7170

D mm	**734001.... L= 71 mm** €	**734002.... L= 80 mm** €	**734003.... L= 100 mm** €	**734004.... L= 130 mm** €
10,6 - 10,9	*6,55*	*7,10*	**8,95**	*13,40*
11,0	*5,85*	*6,40*	*8,35*	*12,40*
11,5 - 12,0	*6,55*	**7,30**	**9,30**	*14,20*
12,5 - 13,0	*7,45*	*8,20*	**10,35**	**16,40**
13,5	*8,75*	*9,65*	*12,40*	*17,85*
14,0	*8,75*	**9,65**	*12,40*	*17,85*
14,5 - 15,0	*10,35*	*11,50*	*14,55*	*20,35*
15,5 - 16,0	*12,55*	*14,–*	*17,85*	*23,65*
16,5	*13,65*	*15,–*	*19,10*	*28,20*
17,0	*13,65*	*15,–*	*19,85*	*28,20*
17,5 - 18,0	*15,80*	*17,45*	*22,20*	*31,25*
18,5 - 19,0	*18,–*	*19,85*	*25,45*	*36,70*
19,5 - 20,0	*21,45*	*23,65*	*30,–*	*41,80*
	7170	7170	7170	7170

Precision punch, type DA, HSS

HSS | DIN 9861

- **Type DA**
- Hardened and tempered HSS, hot-formed head further tempered after rounding shank ground and lapped
- Hardness: Shank 62 - 66 HRc, head 45 - 55 HRc
- Tolerance h6



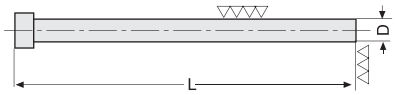
D mm		L= 71 mm art.no.	€		L= 100 mm art.no.	€
2.0	10	**734011** 0200	2,30	10	**734013** 0200	3,05
3.0	10	734011 0300	2,30	10	734013 0300	2,90
4.0	10	734011 0400	2,50	10	734013 0400	3,20
5.0	5	734011 0500	2,65	10	734013 0500	3,45
6.0	5	734011 0600	2,75	5	734013 0600	3,85
7.0	5	734011 0700	3,80	5	734013 0700	4,40
8.0	5	734011 0800	3,45	5	734013 0800	4,20
9.0	5	734011 0900	3,65	5	734013 0900	5,10
		7170			7170	

D mm		L= 71 mm art.no.	€		L= 100 mm art.no.	€
10.0	5	734011 1000	4,40	5	734013 1000	5,85
11.0	5	734011 1100	5,30	5	734013 1100	6,85
12.0	5	734011 1200	4,40	5	734013 1200	7,30
13.0	1	734011 1300	6,95	1	734013 1300	8,95
14.0	1	734011 1400	8,–	1	734013 1400	10,55
15.0	1	734011 1500	10,–	1	734013 1500	12,90
16.0	1	734011 1600	11,85	1	734013 1600	16,40
		7170			7170	

Precision punch, cylindrical head, type A

HSS | ISO 8020

- **With cylindrical head, type A**
- Hardened, ground and lapped HSS, hot-formed head with additional tempering
- Hardness: Shank: 62 - 66 HRc, head 47 - 57 HRc
- Tolerance m5



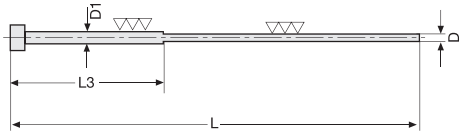
D mm	L = 71 mm art.no.	€	L = 80 mm art.no.	€	L = 100 mm art.no.	€
3.0	**734041** 0300	4,30	**734042** 0300	4,30		
4.0	734041 0400	4,45	734042 0400	4,50	**734043** 0400	4,70
5.0	734041 0500	4,80	734042 0500	4,95	734043 0500	5,20
6.0	734041 0600	4,90	734042 0600	5,35	734043 0600	5,75
7.0	734041 0700	7,80	734042 0700	**6,35**		
8.0	734041 0800	6,15	734042 0800	6,25	734043 0800	6,90
9.0			734042 0900	7,70	734043 0900	**8,35**
	7170		7170		7170	

D mm	L = 71 mm art.no.	€	L = 80 mm art.no.	€	L = 100 mm art.no.	€
10.0	734041 1000	6,90	734042 1000	7,25	734043 1000	7,95
12.0	734041 1200	8,60	734042 1200	**9,10**	734043 1200	**10,15**
13.0	734041 1300	11,20	734042 1300	11,70	734043 1300	12,75
16.0	734041 1600	14,05	734042 1600	14,95	734043 1600	**16,75**
20.0	734041 2000	33,–	734042 2000	34,40	734043 2000	37,65
25.0	734041 2500	40,90	734042 2500	43,–	734043 2500	47,90
	7170		7170		7170	

Precision ejector pins, type CH

WS | DIN 1530

- **Type CH, with cylindrical head, offset shank**
- WS – alloyed tool steel, hardened
- Hardness: Shank 58 - 62 HRc, head 40 - 50 HRc

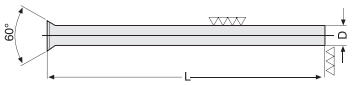


D mm	D1 mm	L= 100 mm L3= 50 mm art.no.	€	L= 125 mm L2= 50 mm art.no.	€	L= 150 mm L3= 50 mm art.no.	€
0.8	2.0	**734121** 0080	6,10	**734122** 0080	6,35		
1.0	2.0	734121 0100	5,25	734122 0100	5,55		
1.1	2.0	734121 0110	5,25	734122 0110	5,55		
1.2	2.0	734121 0120	5,25	734122 0120	5,55		
1.3	2.0	734121 0130	5,25	734122 0130	5,55		
1.5	3.0	734121 0150	5,55	734122 0150	5,85	**734123** 0150	8,–
		7170		7170		7170	

D mm	D1 mm	L= 100 mm L3= 50 mm art.no.	€	L= 125 mm L2= 50 mm art.no.	€	L= 150 mm L3= 50 mm art.no.	€
1.6	3.0	734121 0160	5,55	734122 0160	5,85		
1.9	3.0	734121 0190	5,55				
2.0	3.0			734122 0200	5,55	734123 0200	7,15
2.2	3.0			734122 0220	6,60		
2.5	3.0			734122 0250	5,55		
		7170		7170		7170	

Precision ejector pins, type D

WS | DIN 1530



- WS – alloyed tool steel, hardened
- Hardness: Shank 58 - 62 HRc, head 40 - 50 HRc
- Tolerance g6

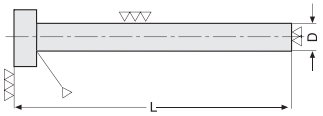
- **Please specify nominal dimension D in mm, as a four digit figure!**
  (e.g. 3.60 mm = 0360; 15.10 mm = 1510)

- Unit prices when purchased in packs

D mm		734101.... L= 100 mm €		734102.... L= 125 mm €		734103.... L= 160 mm €		734104.... L= 200 mm €		734105.... L= 250 mm €
1,0 - 1,9	10	**1,60**	10	**1,70**	10	*2,15*				
2,0	10	**1,20**	10	*1,50*	10	**1,75**	10	*2,10*	10	*2,80*
2,1 - 2,4	10	**1,40**	10	*1,55*	10	*1,85*				
2,5	10	**1,10**	10	**1,40**	10	*1,65*	10	*2,10*	10	*2,95*
2,6 - 2,9	10	**1,40**	10	**1,55**	10	*1,85*				
3,0	10	**1,10**	10	**1,35**	10	*1,65*	10	*2,10*	10	*3,25*
3,1 - 3,4	10	*1,70*	10	*1,80*	10	*2,10*				
3,5	10	**1,25**	10	**1,45**	10	*1,70*	10	*2,20*	10	*3,45*
3,6 - 3,9	10	*1,70*	10	*1,80*	10	*2,10*				
4,0	10	**1,30**	10	**1,40**	10	*1,70*	10	*2,–*	10	*3,25*
4,1	10	**2,25**	10	*2,50*	10	*3,05*				
4,2	10	**1,70**	10	*2,–*	10	*2,25*				
4,3 - 4,4	10	*2,25*	10	*2,50*	10	*3,05*				
4,5	10	*1,40*	10	**1,65**	10	*1,90*	10	*2,40*	10	*3,35*
4,6 - 4,9	10	*2,25*	10	*2,50*	10	*3,05*				
5,0	10	**1,45**	10	**1,65**	10	*1,95*	10	*2,40*	10	*2,95*
5,1	10	*2,50*	10	*3,25*	10	*3,80*				
5,2	10	*2,–*	10	*2,25*	10	*2,75*				
5,3 - 5,4	10	**2,50**	10	*3,25*	10	*3,80*				
5,5	10	*1,65*	10	**1,95**	10	*2,40*				
5,6 - 5,9	10	*2,50*	10	*3,25*	10	*3,80*				
6,0	10	**1,70**	10	**2,–**	10	*2,35*	10	*2,85*	10	*3,90*
6,1	10	*3,20*	10	*3,45*	10	*4,20*				
6,2	10	*2,40*	10	*3,15*	10	*3,95*				
6,3	10	*3,75*	10	*4,45*	10	*5,55*				
6,4	10	**3,70**	10	*4,45*	10	*5,55*				
6,5	10	*2,40*	10	*3,15*	10	*3,95*				
6,6 - 6,8	10	*3,70*	10	**4,45**	10	*5,55*				
6,9	10	*3,70*	10	*4,45*	10	*4,30*				
7,0	10	*1,95*	10	*2,50*	10	*3,05*				
7,1	10	*3,95*	10	**4,80**	10	*5,80*				
7,2	10	*3,95*	10	*4,80*	10	*5,95*				
7,3	10	*3,95*	10	*4,80*	10	*5,80*				
7,4	10	*3,90*	10	*4,75*	10	*5,80*				
7,5	10	*2,70*	10	**3,50**	10	*4,35*				
7,6	10	*3,95*	10	*4,80*	10	*5,95*				
7,7	10	*3,95*	10	*4,70*	10	*5,95*				
7,8	10	*3,95*	10	*4,80*	10	*5,95*				
7,9	10	*3,95*	10	*5,80*	10	*5,95*				
8,0	10	*2,–*	10	*2,45*	10	*3,05*	10	*3,80*	10	*4,85*
8,1	10	*6,15*	10	*7,40*						
8,2	10	*3,45*	10	*4,25*	10	*5,05*				
8,3	10	*6,15*	10	*7,40*	10	*7,20*				
8,4	10	*6,15*	10	*7,40*	10	*9,85*				
8,5	10	*3,45*	10	*4,25*	10	*5,05*				
8,6	10	*6,15*	10	*9,85*	10	*9,85*				
8,7	10	*7,40*	10	*7,40*	10	*7,20*				
8,8	10	*7,40*	10	*9,85*	10	*9,85*				
8,9	10	*9,85*	10	*9,85*	10	*7,20*				
9,0	10	*3,45*	10	*4,25*	10	*5,05*	10	*6,45*	10	*8,–*
9,5	10	*6,75*	10	*8,25*	10	*5,70*	10	*13,25*		
10,0	10	*3,05*	10	*3,55*	10	*4,20*	10	*5,60*	10	*6,70*
12,0	10	**3,80**	10	*4,60*	10	*5,50*	10	*7,10*	10	*7,95*
14,0	10	*5,85*	10	*6,25*	10	*7,85*	10	*9,65*	10	*11,35*
16,0	10	*6,60*	10	*7,75*	10	*9,15*	10	*11,35*	10	*15,10*
		7170		7170		7170		7170		7170

Precision ejector pins, type AH

WS | DIN 1530



Type AH, with cylindrical head

- WS – alloyed tool steel, hardened
- Hardness: Shank 58 - 62 HRc, head 40 - 50 HRc
- Other lengths and diameters available on request

- **Please specify nominal dimension D in mm, as a four digit figure!** (e.g. 3.60 mm = 0360; 15.10 mm = 1510)

- Unit prices when purchased in packs

D mm		734111.... L= 100 mm €		734112.... L= 125 mm €		734113.... L= 160 mm €
1 - 1,4	10	3,70	10	4,05	10	4,45
1,5 - 1,9	10	2,25	10	2,60	10	2,95
2	10	1,45	10	1,75	10	2,05
2,1	10	2,15	10	2,25	10	2,40
2,2	10	**1,70**	10	1,85	10	2,05
2,3 - 2,4	10	**2,15**	10	2,25	10	2,40
2,5	10	1,45	10	1,75	10	2,–
2,6	10	**2,15**	10	2,25	10	2,40
2,7	10	1,65	10	1,80	10	2,10
2,8	10	2,15	10	2,55	10	2,40
2,9	10	2,40	10	2,25	10	2,40
3	10	1,45	10	1,65	10	1,95
3,1	10	2,25	10	2,60	10	2,60
3,2	10	1,60	10	1,85	10	2,05
3,3 - 3,4	10	2,25	10	2,40	10	2,60
3,5	10	1,60	10	1,75	10	2,10
3,6	10	2,25	10	2,40	10	2,60
3,7	10	1,60	10	1,75	10	2,15
3,8	10	2,25	10	2,40	10	2,60
3,9	10	2,60	10	2,40	10	2,60
4	10	1,55	10	1,75	10	2,–
4,1	10	2,80	10	2,80	10	2,80
4,2	10	1,70	10	2,–	10	2,20
4,3	10	2,80			10	2,80
4,4	10	2,80	10	2,80	10	4,60
4,5	10	1,70	10	1,95	10	2,15
4,6	10	2,80	10	2,80	10	2,80
4,7	10	1,85	10	2,05	10	2,20
4,8 - 4,9	10	2,80	10	2,80	10	2,80
		7170		7170		7170

D mm		734111.... L= 100 mm €		734112.... L= 125 mm €		734113.... L= 160 mm €
5	10	1,65	10	1,95	10	2,10
5,1	10	2,95	10	2,95	10	2,95
5,2	10	2,10	10	2,25	10	2,50
5,3 - 5,4	10	2,95			10	2,95
5,5	10	2,–	10	2,25	10	2,55
5,6	10	2,95			10	2,95
5,7			10	2,60	10	2,95
5,8			10	2,95	10	2,95
5,9	10	5,80			10	2,95
6	10	1,85	10	2,10	10	2,50
6,1	10	4,20			10	4,20
6,2	10	2,70	10	2,70	10	3,10
6,5	10	2,20	10	2,70	10	3,20
7	10	2,20	10	2,70	10	3,05
7,5	10	2,80	10	3,55	10	4,05
8	10	2,25	10	2,75	10	3,20
8,2 - 8,5	10	3,05	10	3,60	10	4,15
9	10	3,05	10	3,75	10	4,25
10	10	3,20	10	3,70	10	4,25
10,2	10	3,70			10	5,55
10,5	10	3,70	10	4,65	10	5,55
11					10	7,20
12	10	3,70	10	4,95	10	5,85
12,2	10	4,30			10	6,75
12,5	10	4,30	10	5,30	10	6,75
14	10	5,15	10	6,35	10	7,75
16	10	7,–	10	8,15	10	9,25
18					10	14,15
20					10	12,95
		7170		7170		7170

D mm		734114.... L= 200 mm €		734115.... L= 250 mm €		734116.... L= 315 mm €
2	10	2,40	10	3,10	10	3,85
2,2	10	2,50	10	3,15		
2,5	10	2,40	10	3,15	10	4,10
2,7	10	2,40	10	3,35		
3	10	2,25	10	3,20	10	**4,05**
3,2	10	2,50	10	2,75		
3,5	10	2,60	10	3,25	10	3,70
3,7	10	2,50	10	3,25		
4	10	2,35	10	3,35	10	4,10
4,2	10	2,75	10	3,45	10	4,35
4,5	10	2,60	10	3,55	10	4,80
4,7	10	2,80	10	3,70		
5	10	2,50	10	3,50	10	4,45
5,2	10	3,–	10	4,05	10	5,10
5,3	10	2,95				
		7170		7170		7170

D mm		734114.... L= 200 mm €		734115.... L= 250 mm €		734116.... L= 315 mm €
5,5	10	3,10	10	4,10	10	5,25
6	10	2,95	10	3,70	10	4,70
6,2	10	3,90	10	5,55	10	6,55
6,5	10	3,90	10	5,50	10	7,10
7	10	3,90	10	5,65	10	7,40
8	10	3,70	10	5,10	10	6,75
8,2 - 8,5	10	5,45	10	7,15	10	9,50
9	10	5,35	10	7,–	10	9,10
10	10	5,50	10	7,–	10	8,40
12	10	6,90	10	8,60	10	9,70
14	10	8,95	10	11,30	10	14,15
16	10	11,05	10	14,50	10	18,30
18	10	16,80	10	23,75	10	27,65
20	10	16,40	10	21,50	10	25,80
		7170		7170		7170

Precision ejector pins, type A

DIN 1530 A

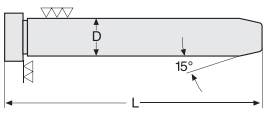
- **Type A, with cylindrical head for die-casting moulds, pressing and injection tools**
- Nitridable hot-working steel, heat-resistant up to 600 °C, nitrided, ground
- Hardness: Shank min. 950 HV 0.3 (approx. 70 HRc), head 50 ± 5 HRc
- Core tensile strength: approx. 1400 - 1500 N/mm²

- Unit prices when purchased in packs

D mm	L = 100 mm art.no.	€	L = 125 mm art.no.	€	L= 160 mm art.no.	€	L = 200 mm art.no.	€	L = 250 mm art.no.	€	L = 315 mm art.no.	€
1.5	10 **734181** 0150	4,40	10 **734182** 0150	4,65	10 **734183** 0150	5,05	10 **734184** 0150	5,50				
2	10 734181 0200	2,80	10 734182 0200	2,95	10 734183 0200	3,15	10 734184 0200	3,45	10 **734185** 0200	3,65		
2.2	10 734181 0220	3,80	10 734182 0220	3,90	10 734183 0220	4,–	10 734184 0220	4,10				
2.5	10 734181 0250	3,20	10 734182 0250	3,40	10 734183 0250	3,50	10 734184 0250	4,–	10 734185 0250	4,–	10 **734186** 0250	4,60
2.7	10 734181 0270	3,80	10 734182 0270	3,90	10 734183 0270	4,–	10 734184 0270	4,10	10 734185 0270	3,90		
3	10 734181 0300	2,55	10 734182 0300	2,70	10 734183 0300	2,80	10 734184 0300	3,15	10 734185 0300	3,50	10 734186 0300	4,–
3.2	10 734181 0320	3,15	10 734182 0320	3,45	10 734183 0320	3,50	10 734184 0320	3,90	10 734185 0320	4,30	10 734186 0320	4,80
3.5	10 734181 0350	3,50	10 734182 0350	3,55	10 734183 0350	3,75	10 734184 0350	4,15	10 734185 0350	4,35	10 734186 0350	5,45
3.7	10 734181 0370	3,50	10 734182 0370	3,85	10 734183 0370	4,–	10 734184 0370	4,45	10 734185 0370	4,75	10 734186 0370	5,90
4	10 734181 0400	2,70	10 734182 0400	2,85	10 734183 0400	2,95	10 734184 0400	3,25	10 734185 0400	3,50	10 734186 0400	4,40
4.2	10 734181 0420	3,45	10 734182 0420	3,70	10 734183 0420	3,85	10 734184 0420	4,35	10 734185 0420	4,70	10 734186 0420	5,50
4.5	10 734181 0450	3,65	10 734182 0450	3,90	10 734183 0450	4,–	10 734184 0450	4,45	10 734185 0450	4,85	10 734186 0450	5,75
5	10 734181 0500	2,70	10 734182 0500	2,85	10 734183 0500	3,05	10 734184 0500	3,20	10 734185 0500	4,35	10 734186 0500	5,05
5.2	10 734181 0520	3,45	10 734182 0520	3,65	10 734183 0520	3,80	10 734184 0520	4,35	10 734185 0520	4,80	10 734186 0520	5,75
5.5	10 734181 0550	3,85	10 734182 0550	3,95	10 734183 0550	4,10	10 734184 0550	4,70	10 734185 0550	5,15	10 734186 0550	6,20
6	10 734181 0600	3,–	10 734182 0600	3,20	10 734183 0600	3,45	10 734184 0600	3,70	10 734185 0600	4,10	10 734186 0600	4,70
6.2	10 734181 0620	4,80	10 734182 0620	4,95	10 734183 0620	5,45	10 734184 0620	6,45	10 734185 0620	7,–	10 734186 0620	8,75
6.5	10 734181 0650	4,75	10 734182 0650	5,–	10 734183 0650	5,35	10 734184 0650	6,35	10 734185 0650	6,95	10 734186 0650	8,70
7	10 734181 0700	4,70	10 734182 0700	5,–	10 734183 0700	5,35	10 734184 0700	5,65	10 734185 0700	6,80	10 734186 0700	7,60
8	10 734181 0800	3,50	10 734182 0800	3,80	10 734183 0800	4,20	10 734184 0800	4,50	10 734185 0800	5,20	10 734186 0800	5,90
8.2	10 734181 0820	5,35	10 734182 0820	5,75	10 734183 0820	6,–	10 734184 0820	6,95	10 734185 0820	7,90	10 734186 0820	9,25
8.5	10 734181 0850	5,85	10 734182 0850	6,25	10 734183 0850	6,85	10 734184 0850	8,05	10 734185 0850	9,15	10 734186 0850	11,60
9	10 734181 0900	5,85	10 734182 0900	6,10	10 734183 0900	6,65	10 734184 0900	7,50	10 734185 0900	8,55	10 734186 0900	10,–
10	10 734181 1000	4,05	10 734182 1000	4,50	10 734183 1000	5,10	10 734184 1000	5,80	10 734185 1000	6,60	10 734186 1000	7,75
10.2	10 734181 1020	6,95	10 734182 1020	7,50	10 734183 1020	8,05	10 734184 1020	10,40	10 734185 1020	11,50	10 734186 1020	14,75
10.5	10 734181 1050	9,50	10 734182 1050	9,95	10 734183 1050	10,80	10 734184 1050	12,70	10 734185 1050	14,30	10 734186 1050	16,25
11	10 734181 1100	7,75	10 734182 1100	8,35	10 734183 1100	8,90	10 734184 1100	10,65	10 734185 1100	11,75	10 734186 1100	13,50
12	10 734181 1200	5,45	10 734182 1200	6,40	10 734183 1200	7,15	10 734184 1200	8,90	10 734185 1200	10,80	10 734186 1200	4,60
12.2	10 734181 1220	8,40	10 734182 1220	10,30	10 734183 1220	11,65	10 734184 1220	14,60	10 734185 1220	16,25	10 734186 1220	17,05
12.5	10 734181 1250	8,40	10 734182 1250	10,30	10 734183 1250	11,65	10 734184 1250	14,60	10 734185 1250	16,25	10 734186 1250	17,05
14	10 734181 1400	6,75	10 734182 1400	9,85	10 734183 1400	10,25	10 734184 1400	11,60	10 734185 1400	13,05	10 734186 1400	14,50
16	10 734181 1600	8,95	10 734182 1600	11,–	10 734183 1600	11,40	10 734184 1600	13,70	10 734185 1600	15,65	10 734186 1600	17,55
18					10 734183 1800	13,35	10 734184 1800	18,55	10 734185 1800	21,60	10 734186 1800	26,05
20			10 734182 2000	33,15	10 734183 2000	14,95	10 734184 2000	18,35	10 734185 2000	21,60	10 734186 2000	26,05
25							10 734184 2500	40,90	10 734185 2500	47,–	10 734186 2500	59,10
	7170		7170		7170		7170		7170		7170	

Ejector pins

- Case-hardened steel, hot-pressed collar
- Shank ground, shank tolerance g6
- Hardness: 60 - 62 HRc
- Other lengths and diameters available on request

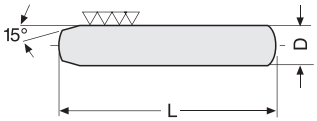


D mm	L = 80 mm art.no.	€	L = 120 mm art.no.	€	L = 140 mm art.no.	€
10	**734283** 1000	6,75	**734285** 1000	8,55		
12	734283 1200	7,85	734285 1200	9,65	**734286** 1200	10,75
14	734283 1400	8,05	734285 1400	10,25	734286 1400	12,25
16	734283 1600	8,95	734285 1600	11,50	734286 1600	13,35
18	734283 1800	9,85	734285 1800	12,60	734286 1800	14,40
20	734283 2000	10,95	734285 2000	14,60	734286 2000	16,05
22	734283 2200	12,80	734285 2200	17,55	734286 2200	19,35
24			734285 2400	19,55	734286 2400	20,95
	7170		7170		7170	

D mm	L = 160 mm art.no.	€	L = 180 mm art.no.	€	L = 200 mm art.no.	€
12	**734287** 1200	11,70				
14	734287 1400	14,40	**734288** 1400	16,25		
16	734287 1600	15,35	734288 1600	20,10	**734289** 1600	25,10
18	734287 1800	16,05	734288 1800	18,25	734289 1800	20,05
20	734287 2000	17,90	734288 2000	20,25	734289 2000	23,–
22	734287 2200	20,95	734288 2200	23,–	734289 2200	25,35
24	734287 2400	22,80	734288 2400	24,75	734289 2400	26,65
	7170		7170		7170	

Precision cylindrical pins

DIN 6325



- Special steel with tensile strength > 600 N/mm²; hardened, tempered, ground and lapped
- Hardness: through-hardened, 60 ± 2 HRc
- Tolerance m6 (h6 on request), Other lengths and diameters available on request
- Unit prices when purchased in packs

D mm	L = 8 mm			L = 10 mm			L = 12 mm			L = 14 mm		
		art.no.	€		art.no.	€		art.no.	€		art.no.	€
2	100	**734302** 0200	**0,05**	100	**734303** 0200	*0,05*	100	**734304** 0200	*0,05*	100	**734305** 0200	**0,05**
2.5	100	734302 0250	*0,05*	100	734303 0250	*0,05*	100	734304 0250	*0,05*	100	734305 0250	*0,05*
3	100	734302 0300	**0,05**	100	734303 0300	**0,05**	100	734304 0300	*0,05*	100	734305 0300	*0,05*
4	100	734302 0400	**0,05**	100	734303 0400	**0,05**	100	734304 0400	**0,05**	100	734305 0400	*0,10*
5				100	734303 0500	**0,10**	100	734304 0500	*0,10*	100	734305 0500	*0,10*
6				100	734303 0600	*0,10*	100	734304 0600	**0,10**	100	734305 0600	*0,10*
8							100	734304 0800	*0,15*	100	734305 0800	*0,15*
10										100	734305 1000	*0,25*
		7170			7170			7170			7170	

D mm	L = 16 mm			L = 18 mm			L = 20 mm			L = 24 mm		
		art.no.	€		art.no.	€		art.no.	€		art.no.	€
2	100	**734306** 0200	*0,05*	100	**734307** 0200	*0,05*	100	**734308** 0200	*0,05*			
2.5	100	734306 0250	*0,05*				100	734308 0250	*0,05*			
3	100	734306 0300	*0,05*	100	734307 0300	*0,05*	100	734308 0300	*0,05*	100	**734309** 0300	*0,10*
4	100	734306 0400	*0,10*	100	734307 0400	*0,10*	100	734308 0400	*0,10*	100	734309 0400	*0,10*
5	100	734306 0500	*0,10*	100	734307 0500	*0,10*	100	734308 0500	*0,10*	100	734309 0500	*0,10*
6	100	734306 0600	*0,10*	100	734307 0600	*0,10*	100	734308 0600	*0,15*	100	734309 0600	*0,15*
8	100	734306 0800	*0,15*	100	734307 0800	*0,20*	100	734308 0800	*0,20*	100	734309 0800	*0,20*
10	100	734306 1000	*0,25*	100	734307 1000	*0,25*	100	734308 1000	*0,20*	100	734309 1000	*0,25*
12				100	734307 1200	*0,30*	100	734308 1200	*0,35*	100	734309 1200	*0,35*
		7170			7170			7170			7170	

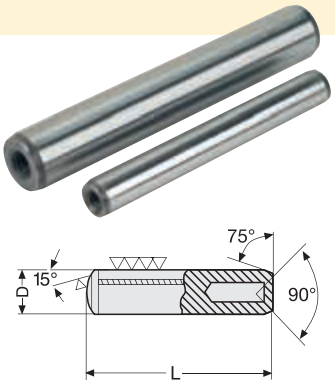
D mm	L = 28 mm			L = 30 mm			L = 32 mm			L = 36 mm		
		art.no.	€		art.no.	€		art.no.	€		art.no.	€
2	100	**734310** 0200	*0,10*									
2.5	100	734310 0250	*0,10*									
3	100	734310 0300	*0,10*	100	**734311** 0300	*0,10*	100	**734312** 0300	*0,10*	100	**734313** 0300	*0,10*
4	100	734310 0400	*0,10*	100	734311 0400	*0,10*	100	734312 0400	*0,10*	100	734313 0400	*0,10*
5	100	734310 0500	*0,15*	100	734311 0500	*0,15*	100	734312 0500	*0,15*	100	734313 0500	*0,15*
6	100	734310 0600	*0,15*	100	734311 0600	*0,15*	100	734312 0600	*0,15*	100	734313 0600	*0,20*
8	100	734310 0800	*0,20*	100	734311 0800	*0,20*	100	734312 0800	*0,20*	100	734313 0800	*0,25*
10	100	734310 1000	*0,30*	100	734311 1000	*0,30*	100	734312 1000	*0,35*	100	734313 1000	*0,35*
12	100	734310 1200	*0,40*	100	734311 1200	*0,45*	100	734312 1200	*0,45*	100	734313 1200	*0,50*
14							100	734312 1400	*0,95*	100	734313 1400	*1,–*
16	100	734310 1600	*0,95*	100	734311 1600	*0,95*	100	734312 1600	*1,–*	100	734313 1600	*1,05*
20							100	734312 2000	*1,75*	100	734313 2000	*1,80*
		7170			7170			7170			7170	

D mm	L = 40 mm			L = 50 mm			L = 60 mm			L = 70 mm		
		art.no.	€		art.no.	€		art.no.	€		art.no.	€
3	100	**734314** 0300	*0,10*	100	**734316** 0300	*0,05*						
4	100	734314 0400	*0,10*	100	734316 0400	*0,15*				100	**734319** 0400	*0,25*
5	100	734314 0500	*0,15*	100	734316 0500	*0,20*	100	**734318** 0500	*0,20*			
6	100	734314 0600	*0,20*	100	734316 0600	*0,20*	100	734318 0600	*0,25*	100	734319 0600	*0,30*
8	100	734314 0800	*0,25*	100	734316 0800	*0,30*	100	734318 0800	*0,35*	100	734319 0800	*0,40*
10	100	734314 1000	*0,40*	100	734316 1000	*0,50*	100	734318 1000	*0,50*	100	734319 1000	*0,65*
12	100	734314 1200	*0,50*	100	734316 1200	*0,65*	100	734318 1200	*0,75*	100	734319 1200	*0,85*
14	100	734314 1400	*1,–*	100	734316 1400	*1,10*	100	734318 1400	*1,30*	100	734319 1400	*1,45*
16	100	734314 1600	*1,10*	100	734316 1600	*1,20*	100	734318 1600	*1,40*	100	734319 1600	*1,50*
20	100	734314 2000	*1,90*	100	734316 2000	*2,10*	100	734318 2000	*2,30*	100	734319 2000	*2,50*
25	100	734314 2500	*3,95*	100	734316 2500	*4,95*	100	734318 2500	*5,25*	100	734319 2500	*6,10*
		7170			7170			7170			7170	

D mm	L = 80 mm			L = 100 mm		
		art.no.	€		art.no.	€
6	100	**734320** 0600	*0,35*			
8	100	734320 0800	*0,50*	100	**734323** 0800	*0,65*
10	100	734320 1000	*0,65*	100	734323 1000	*0,95*
12	100	734320 1200	*0,95*	100	734323 1200	*1,20*
14	100	734320 1400	*1,60*	100	734323 1400	*2,–*
16	100	734320 1600	*1,65*	100	734323 1600	*2,05*
20	100	734320 2000	*2,70*	100	734323 2000	*3,25*
25	100	734320 2500	*6,55*	100	734323 2500	*8,20*
		7170			7170	

Precision cylindrical pins with internal thread

DIN 7979D



With internal thread and air vent

- Special steel with tensile strength > 600 N/mm²; hardened, tempered, ground and lapped
- Hardness: through-hardened, 60 ± 2 HRc
- Tolerance m6
- Unit prices when purchased in packs

D mm		L = 16 mm art.no.	€		L = 20 mm art.no.	€		L = 24 mm art.no.	€		L = 28 mm art.no.	€
5	100	**734331** 0500	0,30	100	**734332** 0500	0,25	100	**734333** 0500	0,30	100	**734334** 0500	0,30
6	100	734331 0600	0,20	100	734332 0600	0,20	100	734333 0600	0,20	100	734334 0600	0,20
8				100	734332 0800	0,25	100	734333 0800	0,25	100	734334 0800	0,30
10				100	734332 1000	0,30	100	734333 1000	0,30	100	734334 1000	0,35
12				100	734332 1200	0,65	100	734333 1200	0,40	100	734334 1200	0,45
16										100	734334 1600	1,05
		7170			7170			7170			7170	

D mm		L = 30 mm art.no.	€		L = 32 mm art.no.	€		L = 36 mm art.no.	€		L = 40 mm art.no.	€
5	100	**734335** 0500	0,35	100	**734336** 0500	0,35	100	**734337** 0500	0,40	100	**734338** 0500	0,40
6	100	734335 0600	0,25	100	734336 0600	0,25	100	734337 0600	0,30	100	734338 0600	0,30
8	100	734335 0800	0,30	100	734336 0800	0,30	100	734337 0800	0,35	100	734338 0800	0,40
10	100	734335 1000	0,35	100	734336 1000	0,35	100	734337 1000	**0,40**	100	734338 1000	0,45
12	100	734335 1200	0,45	100	734336 1200	0,50	100	734337 1200	0,55	100	734338 1200	0,55
13				100	734336 1300	0,95	100	734337 1300	1,–	100	734338 1300	1,05
14				100	734336 1400	0,95	100	734337 1400	1,–	100	734338 1400	1,05
16	100	734335 1600	1,05	100	734336 1600	1,10	100	734337 1600	1,15	100	734338 1600	1,25
20				100	734336 2000	1,75	100	734337 2000	1,85	100	734338 2000	1,95
25										100	734338 2500	4,25
		7170			7170			7170			7170	

D mm		L = 50 mm art.no.	€		L = 60 mm art.no.	€		L = 70 mm art.no.	€
5	100	**734340** 0500	0,45						
6	100	734340 0600	0,35	100	**734342** 0600	0,45	100	**734343** 0600	1,30
8	100	734340 0800	0,45	100	734342 0800	0,55	100	734343 0800	0,95
10	100	734340 1000	0,55	100	734342 1000	0,70	100	734343 1000	1,–
12	100	734340 1200	0,65	100	734342 1200	0,75	100	734343 1200	1,–
13	100	734340 1300	1,20	100	734342 1300	1,35	100	734343 1300	1,45
14	100	734340 1400	1,20	100	734342 1400	1,35	100	734343 1400	1,45
16	100	734340 1600	1,40	100	734342 1600	1,55	100	734343 1600	1,70
20	100	734340 2000	2,20	100	734342 2000	2,45	100	734343 2000	2,70
25	100	734340 2500	4,45	100	734342 2500	4,65	100	734343 2500	4,75
30	100	734340 3000	8,–	100	734342 3000	9,05	100	734343 3000	9,55
		7170			7170			7170	

D mm		L = 80 mm art.no.	€		L = 100 mm art.no.	€		L = 120 mm art.no.	€
6	100	**734344** 0600	1,30	100	**734346** 0600	2,50			
8	100	734344 0800	1,–	100	734346 0800	1,75			
10	100	734344 1000	1,10	100	734346 1000	1,40	100	**734347** 1000	1,80
12	100	734344 1200	1,05	100	734346 1200	1,80	100	734347 1200	2,40
13	100	734344 1300	1,60	100	734346 1300	1,85	100	734347 1300	2,70
14	100	734344 1400	1,60	100	734346 1400	1,85	100	734347 1400	2,70
16	100	734344 1600	1,85	100	734346 1600	2,35	100	734347 1600	**2,95**
20	100	734344 2000	2,95	100	734346 2000	3,75	100	734347 2000	4,60
25	100	734344 2500	4,75	100	734346 2500	6,–	100	734347 2500	7,20
30	100	734344 3000	10,10	100	734346 3000	11,95	100	734347 3000	14,60
		7170			7170			7170	